

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL  
WELL ☒

GAS  
WELL ☐

OTHER

SINGLE  
ZONE ☒

MULTIPLE  
ZONE ☐

2. NAME OF OPERATOR

Wildrose Resources Corporation

PH: 303-770-6566

3. ADDRESS OF OPERATOR

4949 South Albion Street, Littleton, CO 80121

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

1943' FSL & 2162' FWL (NE $\frac{1}{4}$ SW $\frac{1}{4}$ )  
199

At proposed prod. zone

Same

CONFIDENTIAL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

12 miles SE of Myton, Utah

15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drlg. unit line, if any)

478'

16. NO. OF ACRES IN LEASE

200

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

40

18. DISTANCE FROM PROPOSED LOCATION\*  
TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

2500'

19. PROPOSED DEPTH

6200'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

5088' GR

22. APPROX. DATE WORK WILL START\*

August 15, 1997

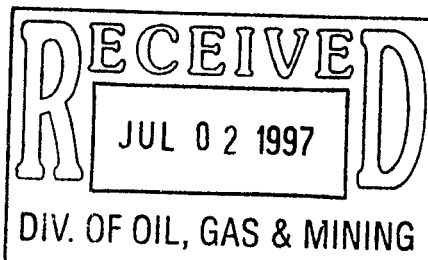
23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8"	24#, J-55	300'	225 sx
7-7/8"	5-1/2"	15.5#, J-55	6200'	800 sx

SEE ATTACHED EXHIBITS: A - Surveyors Plat E - Access Road Map  
B - 10 Point Plan F - Production Facilities  
C - BOP Diagram G - Existing Wells Map  
D - 13 Point Surface Use Program H - Pit & Pad Layout, Cuts & Fills,  
Cross Sections, Rig Layout

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IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

*Kerry J. Keltner*

TITLE Vice President

DATE June 30, 1997

(This space for Federal or State office use)

PERMIT NO.

43-013-31916

APPROVAL DATE

APPROVED BY

*John R. Baye*

TITLE

Associate Director

DATE

8/14/97

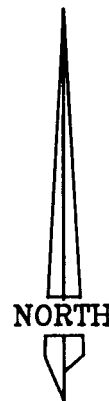
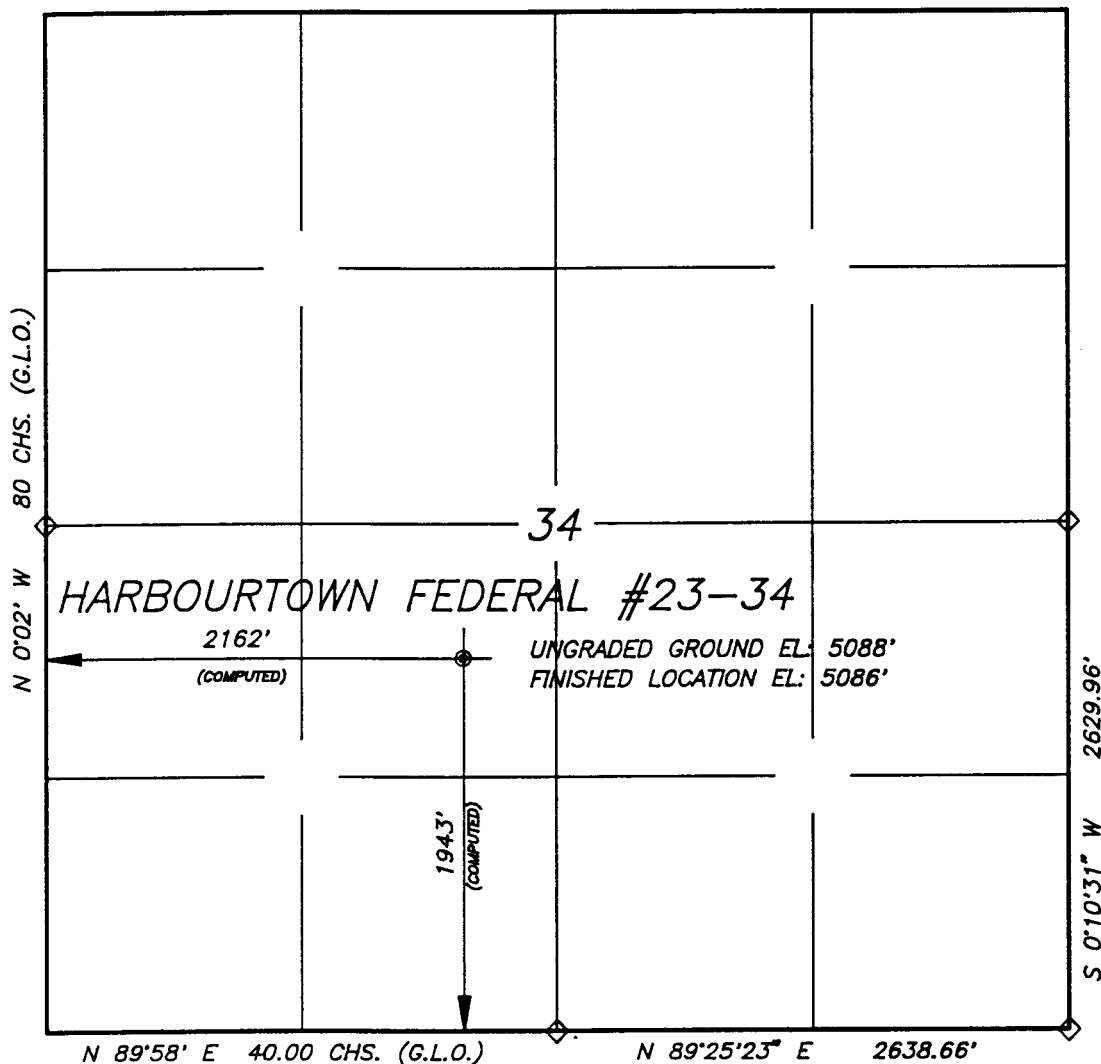
CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**WILDROSE RESOURCES CORP.**  
**WELL LOCATION PLAT**  
**HARBOURTOWN FEDERAL #23-34**

LOCATED IN THE NE1/4 OF THE SW1/4 OF  
 SECTION 34, T8S, R17E, S.L.B.&M.



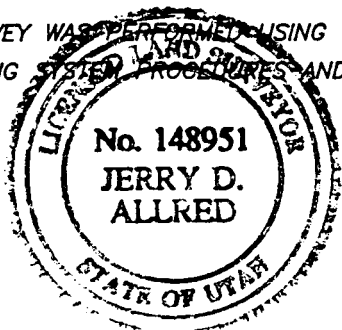
SCALE: 1" = 1000'

**LEGEND AND NOTES**

- ◇ ORIGINAL MONUMENTS FOUND AND USED  
 BY THIS SURVEY.

THE GENERAL LAND OFFICE (G.L.O.) PLAT WAS  
 USED FOR REFERENCE AND CALCULATIONS AS  
 WAS THE U.S.G.S. QUADRANGLE MAP.

THIS SURVEY WAS PERFORMED USING GLOBAL  
 POSITIONING SYSTEM PROCEDURES AND EQUIPMENT

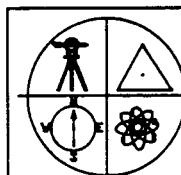


**SURVEYOR'S CERTIFICATE**

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED  
 FROM FIELD NOTES OF AN ACTUAL SURVEY  
 PERFORMED BY ME, DURING WHICH THE SHOWN  
 MONUMENTS WERE FOUND OR ESTABLISHED.

*Jerry D. Allred*  
 JERRY D. ALLRED, REGISTERED LAND SURVEYOR,  
 CERTIFICATE NO. 148951 (UTAH)

Exhibit 'A'



**JERRY D. ALLRED & ASSOCIATES**  
 SURVEYING CONSULTANTS

121 NO. CENTER ST.--P.O. BOX 975  
 DUCHESNE, UTAH 84021  
 (801)-738-5352

4 JUNE 1997

83-123-035

EXHIBIT B

WILDROSE RESOURCES CORPORATION  
HARBOUR TOWN FEDERAL #23-34  
LEASE #U-71368  
NE/SW SECTION 34, T8S, R17E  
DUCHESNE COUNTY, UTAH

TEN POINT COMPLIANCE PROGRAM OF APPROVAL OF OPERATIONS

1. The Geologic Surface Formation

The surface formation is the Uintah (Tertiary).

2. Estimated Tops of Important Geologic Markers

Green River	1700'
Wasatch Tongue of Green River	6100'
Total Depth	6200'

3. Estimated Depths of Anticipated Water, Oil, Gas or Minerals

No water bearing zones are anticipated

Green River    4000' - 6100'    Oil

4. The Proposed Casing Program

<u>HOLE</u>	<u>INTERVAL</u>	<u>LENGTH</u>	<u>SIZE(OP)</u>	<u>WEIGHT, GRADE, JOINT</u>	<u>NEW OR USED</u>
12.25"	0 - 300'	300'	8-5/8"	24# K-55 ST&C	New
7-7/8"	0 - 6200'	6200'	5-1/2"	15.50# J-55 ST&C	New

Cement Program -

Surface Casing: 225 sacks Class "G" plus 2% CaCl<sub>2</sub>

Production Casing: 200 sacks Lite Cement and 600 sacks Class "G" with additives

5. The Operator's Minimum Specifications for Pressure Control

EXHIBIT "C" is a schematic diagram of the blowout preventer equipment. A 2M system will be used. The blind rams and the pipe

Accessories to BOP will include an upper kelly cock, floor safety valve, drill string BOP and choke manifold with pressure rating equivalent to the BOP stack.

Mud system will be 2% KCl water with adequate stocks of sorptive agents on site to handle possible spills of fuel and oil on the surface. Heavier muds will be available to be added if pressure requires.

## 7. The Auxiliary Equipment to be Used

- ## 8. The Testing, Logging and Coring Programs to be Followed

- a) No Drill Stem Tests will be run.
- b) The Logging Program: Dual Later Log 300' - T.D.  
Formation Density-CNL 4000' - T.D.
- c) No coring is anticipated.
- d) Stimulation procedures will be determined after evaluation of logs. If treatment is indicated, appropriate Sundry Notice will be submitted for approval.

9. Any Anticipated Abnormal Pressures or Temperatures

No abnormal pressures or temperatures have been noted or reported in wells drilled in the area nor at the depths anticipated in this well. Bottom hole pressure expected is 1500 psi + or -.

No hydrogen sulfide or other hazardous fluids or gases have been found, reported or known to exist at these depths in the area.

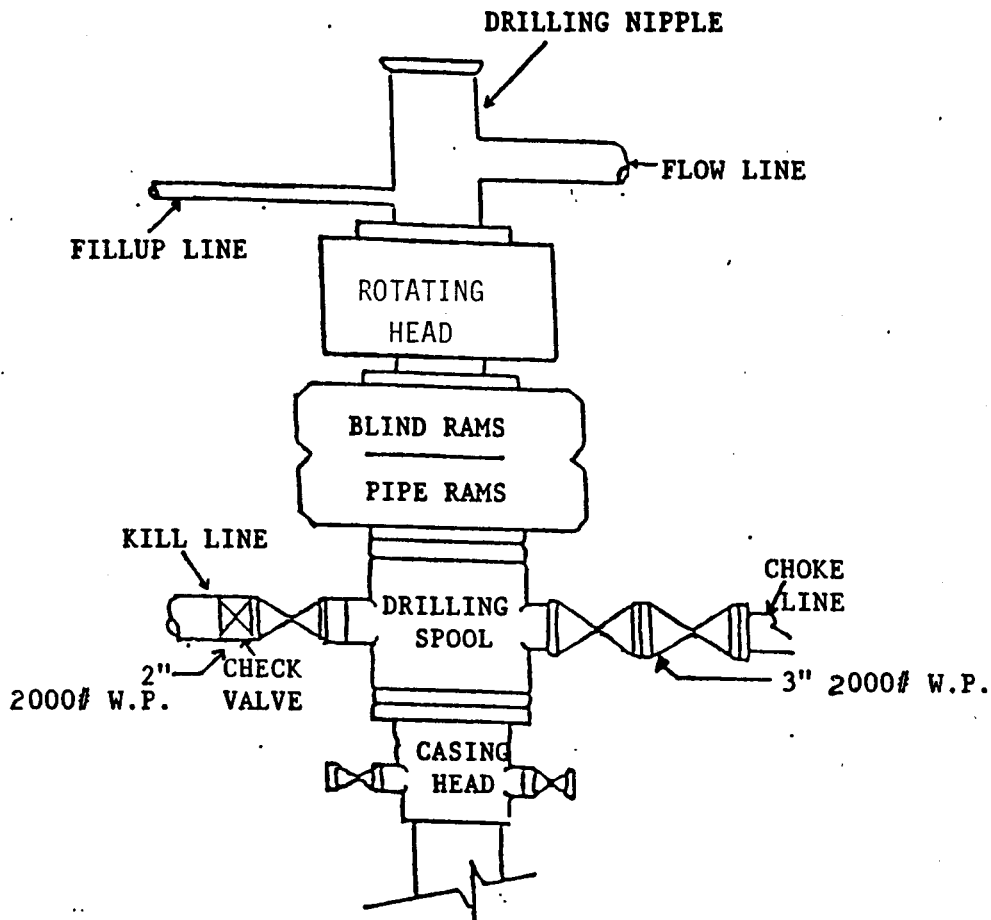
10. Anticipated Starting Date and Duration of the Operations.

The anticipated starting date is August 15, 1997. Operations will cover approximately 10 days for drilling and 14 days for completion.

Hazardous Chemicals

No chemicals subject to reporting under SARA title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported or disposed of in association with the drilling of this well.

EXHIBIT C  
BOP DIAGRAM



NOTE: BOP side outlets may be used in place of drilling spool.

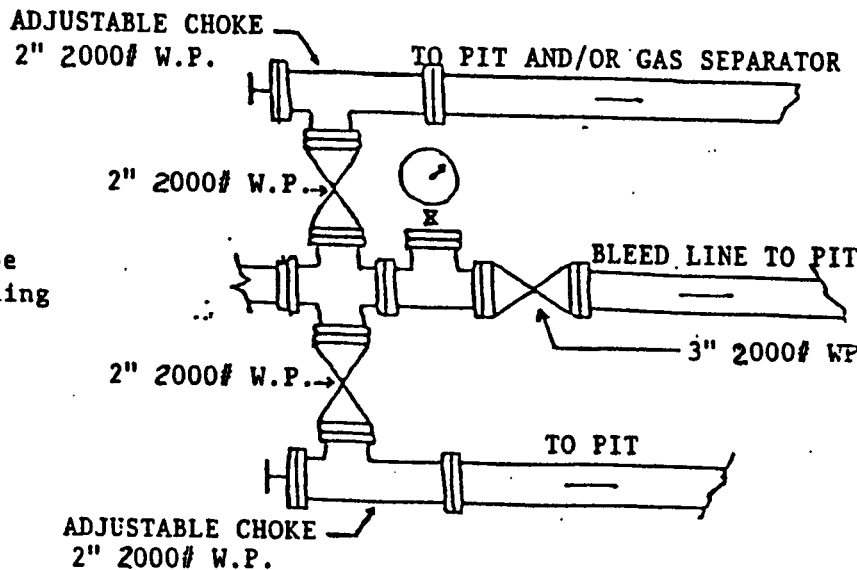


EXHIBIT D

WILDROSE RESOURCES CORPORATION  
HARBOUR TOWN FEDERAL #23-34  
LEASE #U-71368  
NE/SW SECTION 34, T8S, R17E  
DUCHESNE COUNTY, UTAH

Thirteen Point Surface Use Program

Multipoint Requirements to Accompany APD

1. Existing Roads

- A. The proposed well site and elevation plat is shown on Exhibit A.
- B. From Myton, Utah, go west 1 mile. Turn south on Pleasant Valley road. Go south for 11.7 miles. Turn northeast (left) for 2.1 miles. Turn left (west) on to new access road. Continue west 3900' to location.
- C. See Exhibit E for access roads.
- D. There are no plans for improvement of existing roads. Roads will be maintained in present condition.

2. Planned Access Roads - (Newly Constructed)

- A. Length - 3900 feet.
- B. Width - 30' right of way with 18' running surface maximum.
- C. Maximum grades - 2%
- D. Turnouts - N/A
- E. Drainage design - Barrow ditches and water turnouts as required.
- F. Culverts, bridges, cuts and fills - None.
- G. Surfacing material (source) - from location and access road.
- H. Gates, cattle guards and fence cuts - None.

All travel will be confined to existing access road rights of way.

Access roads and surface disturbing activities will conform to standards outlined in the Bureau of Land Management and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development, (1989).

The road shall be upgraded to meet the standards of the anticipated traffic flow and all weather road requirements. Construction/ upgrading shall include ditching, draining, graveling, crowning, and capping the roadbed as necessary to provide a well constructed safe road. Prior to upgrading, the road shall be cleared of any snow cover and allowed to dry completely. Traveling off the 30 foot right of way will not be allowed. Road drainage crossings shall be of the typical dry creek drainage crossing type. Crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossing nor shall the drainages be blocked by the roadbed. Erosion of drainage ditches by runoff water shall be prevented by diversion water off at frequent intervals by means of cutouts. Upgrading shall not be allowed during muddy conditions. Should mud holes develop, they shall be filled in and detours around them avoided.

A Right of Way application is needed. Please consider this APD the application for said Right of Way.

### 3. Location of Existing Wells Within a 1 Mile Radius

See Exhibit G

- A. Water wells - none.
- B. Abandoned wells - none.
- C. Temporarily abandoned wells - one.
- D. Disposal wells - none.
- E. Drilling wells - none.
- F. Producing wells - three.
- G. Shut-in wells - none.
- H. Injection wells - none.

### 4. Location of Existing and/or Proposed Facilities

- A. On well pad - See Exhibit F for all production facilities to be used if well is completed as a producing oil well.
- B. Off well pad - N/A

If a tank battery is constructed on this lease, the battery or

the well pad will be surrounded by a dike of sufficient capacity to contain, at a minimum, the entire content of the largest tank within the battery, unless more stringent protective requirements are deemed necessary by the authorized officer.

Tank battery will be placed on the northwest corner of the location.

All permanent (on site for six months or longer) structures constructed or installed (including pumping units) will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the Rock Mountain Five state Interagency Committee. All facilities will be painted within 6 months of installation. Facilities required to comply with O.S.H.A. (Occupational Safety and Health Act) will be excluded.

The required paint color is desert brown, 10YR.

If at any time the facilities located on public land and authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundary change), BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental or other financial obligation as determined by the authorized officer.

#### 5. Location and Type of Water Supply

- A. Water supply will be from the city of Myton, Utah.
- B. Water will be trucked across existing roads to location.
- C. No water wells to be drilled on lease.

#### 6. Source of Construction Materials

- A. Native materials on lease will be used.
  - B. From Federal land.
  - C. N/A.
- A minerals material application is not required.

#### 7. Methods for Handling Waste Disposal

- A.
  - 1) Drill cuttings will be buried in the reserve pit.

- 2) Portable toilets will be provided for sewage.
- 3) Trash and other waste material will be contained in a trash cage and hauled away to an approved disposal site at the completion of the drilling activities.
- 4) Salts - if any will be disposed of.
- 5) Chemicals - if any will be disposed of.

B. Drilling fluids will be handled in the reserve pit. Any fluids produced during testing operations will be collected in a test tank. If a test tank is not available during drilling, fluids will be handled in the reserve pit. Any oil in the reserve pit will be removed.

Burning will not be allowed. All trash must be contained in trash cage and hauled away to an approved disposal site at the completion of drilling activities.

The reserve pit shall be constructed so as not to leak, break, or allow discharge.

A plastic nylon reinforced liner will be used. It will be a minimum of 12 mil thickness with sufficient bedding (either straw or dirt) to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash, scrap pipe, etc., that could puncture the liner will be disposed of in the pit. More stringent protective requirements may be deemed necessary by the A.O.

After first production, produced waste water will be confined to a lined pit or storage tank for a period not to exceed 90 days. During the 90 day period, in accordance with Onshore Order No. 7, an application for approval of a permanent disposal method and location, along with required water analysis, shall be submitted for the AO's approval. Failure to file an application within the time allowed will be considered an incident of noncompliance.

## 8. Ancillary Facilities

- A. Camp facilities or airstrips will not be required.

## 9. Well Site Layout

- A. See Exhibit H.
- B. See Exhibit H.
- C. See Exhibit H.

The reserve pit will be located on the north side of the location.

The flare pit will be located downwind of the prevailing wind direction on the south side of the location a minimum of 100 feet from the well head and 30 feet from the reserve pit fence.

Topsoil - will be stored at the south side of the location.

Access to the well pad will be from the southeast.

### Fencing Requirements

All pits will be fenced according to the following minimum standards:

a. 39-inch net wire shall be used with at least one strand of barbed wire on top of the net wire (barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence).

b. The net wire shall be no more than 2-inches above the ground. The barbed wire shall be 3-inches above the net wire. Total height of the fence shall be at least 42-inches.

c. Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

d. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any two posts shall be no greater than 16 feet.

e. All wire shall be stretched, by using a stretching device, before it is attached to the corner posts.

The reserve pit fencing will be on three sides during drilling operations and on the fourth side when the rig moves off the location. Pits will be fenced and maintained until clean-up.

## 10. Plans for Restoration of Surfaces

### A. Producing Location:

Immediately upon well completion, the location and surrounding area will be cleared of all debris, materials, trash and junk not required for production.

Immediately upon well completion, any hydrocarbons on the pit shall be removed in accordance with 43 CFR 3162.7-1.

If a plastic nylon reinforced liner is used, it shall be torn and perforated before backfilling of the reserve pit.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 120 days from the date of well completion. Before any dirt work takes place, the reserve pit must have all fluids and hydrocarbons removed and all cans, barrels, pipe, etc., will be removed.

The BLM will be contacted for required seed mixture.

B. Dry Hole/ Abandoned Location:

At such time as the well is plugged and abandoned, the operator will submit a subsequent report of abandonment and BLM will attach the appropriate surface rehabilitation conditions of approval.

11. Surface Ownership

Access Road: Federal  
Location: Federal

12. Other Additional Information

A. The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;

- The mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and

- A time frame for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from

the AO that required mitigation has been completed, the operator will then be allowed to resume construction.

B. The operator will control noxious weeds along rights-of-way for roads, pipelines, well sites, or other applicable facilities. A list of noxious weeds may be obtained from the BLM, or the appropriate County Extension Office. On BLM administered land it is required that a Pesticide Use Proposal shall be submitted, and given approval, prior to the application of herbicides or other pesticides or possible hazardous chemicals.

C. Drilling rigs and/or equipment used during drilling operations on this wellsite will not be stacked or stored on Federal Lands after the conclusion of drilling operations or at any other time without BLM authorization. However, if BLM authorization is obtained, it is only a temporary measure to allow time to make arrangements for permanent storage on commercial facilities. (The BLM does not seek to compete with private industry. There are commercial facilities available for stacking and storing drilling rigs.)

#### Additional Surface Stipulations

An erosion control dam will be built to the east of location.

Reclamation of unused disturbed areas on the well pad/access road no longer needed for operations, such as cut slopes, and fill areas will be accomplished by grading, leveling and seeding as recommended by the Authorized Officer.

#### 13. Lessee's or Operators Representative and Certification Representative

Kary J. Kaltenbacher  
Wildrose Resources Corporation  
4949 South Albion Street  
Littleton, CO 80121  
Telephone: 303-770-6566

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved plan of operations, and any applicable Notice to Lessees. The operator is fully responsible for the actions of his sub-contractors. A copy of these conditions will be furnished to the field representative to insure compliance.

A complete copy of the approved APD and ROW grant, if applicable, shall be on location during construction of the location and drilling activities.

The operator or his/her contractor shall contact the BLM Office at (801) 789-1362 forty eight (48) hours prior to

construction activities.

The BLM Office shall be notified upon site completion prior to moving on the drilling rig.


Self-Certification Statement:

Please be advised that Wildrose Resources Corporation is considered to be the operator of Harbourtown Federal Well No. 23-34, NE/4 SW/4 of Section 34, Township 8 South, Range 17 East; Lease Number U-71368; Duchesne County, Utah; and is responsible for the operations conducted upon the leased lands. Bond coverage is provided by Statewide Oil and Gas Bond No. 229352, Allied Mutual Insurance Company, approved by the BLM effective October 26, 1987.

Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are true and correct to the best of my knowledge; and, that the work associated with the operations proposed here will be performed by Wildrose Resources Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date June 30, 1997

  
Kary J. Kaltenbacher  
Vice President

Onsite Date: June 26, 1997

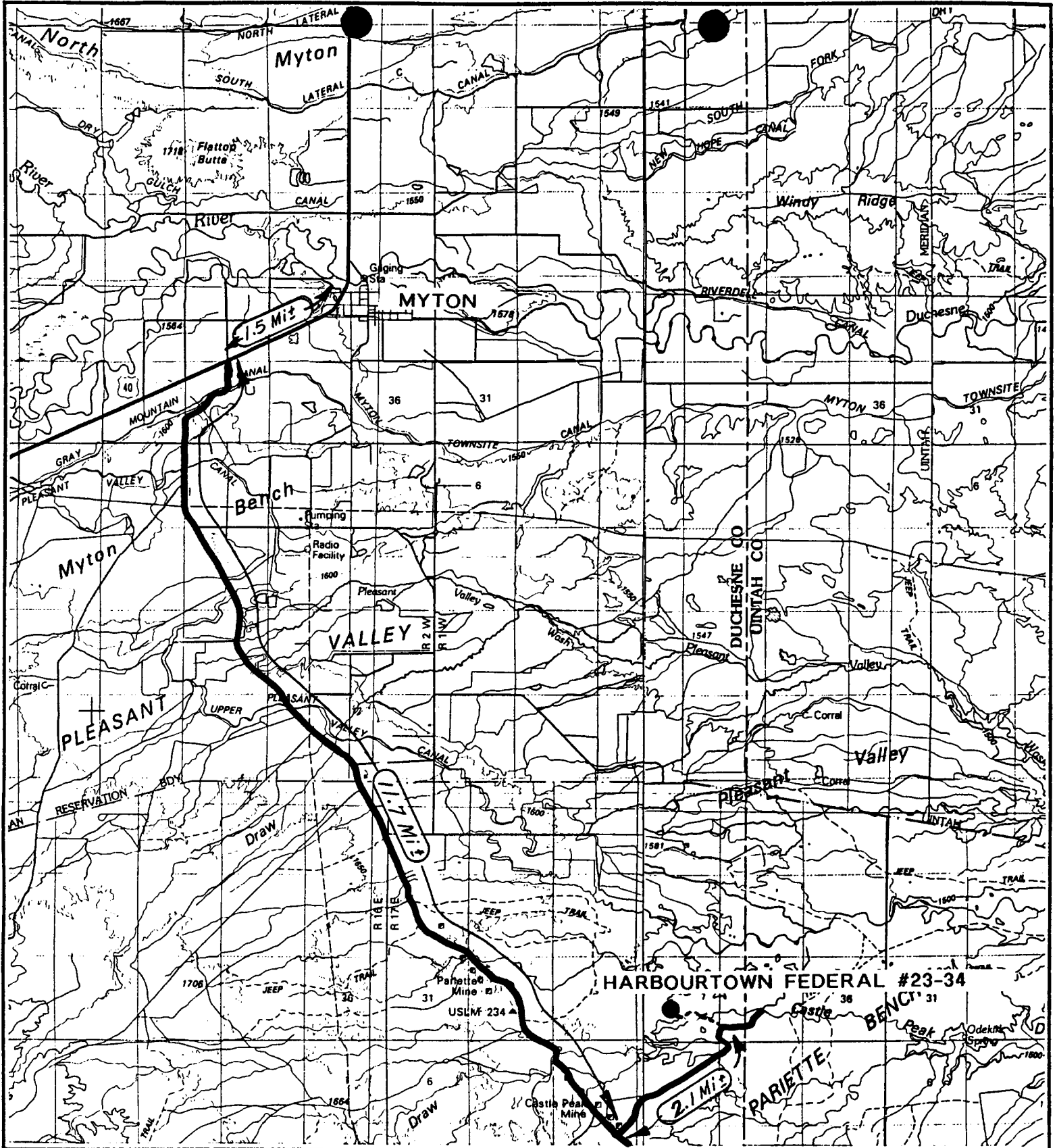
Participants on Joint Inspection

Kary J. Kaltenbacher  
Stan Olmstead

Wildrose Resources Corporation  
BLM

CONFIDENTIAL STATEMENT

WILDROSE RESOURCES CORPORATION, AS OPERATOR, REQUESTS THAT ALL INFORMATION RELATED TO THIS WELL BE HELD TIGHT FOR THE MAXIMUM PERIOD ALLOWED BY FEDERAL AND STATE REGULATIONS.



TOPOGRAPHIC

MAP "A"

Exhibit 'E-1'

NORTH

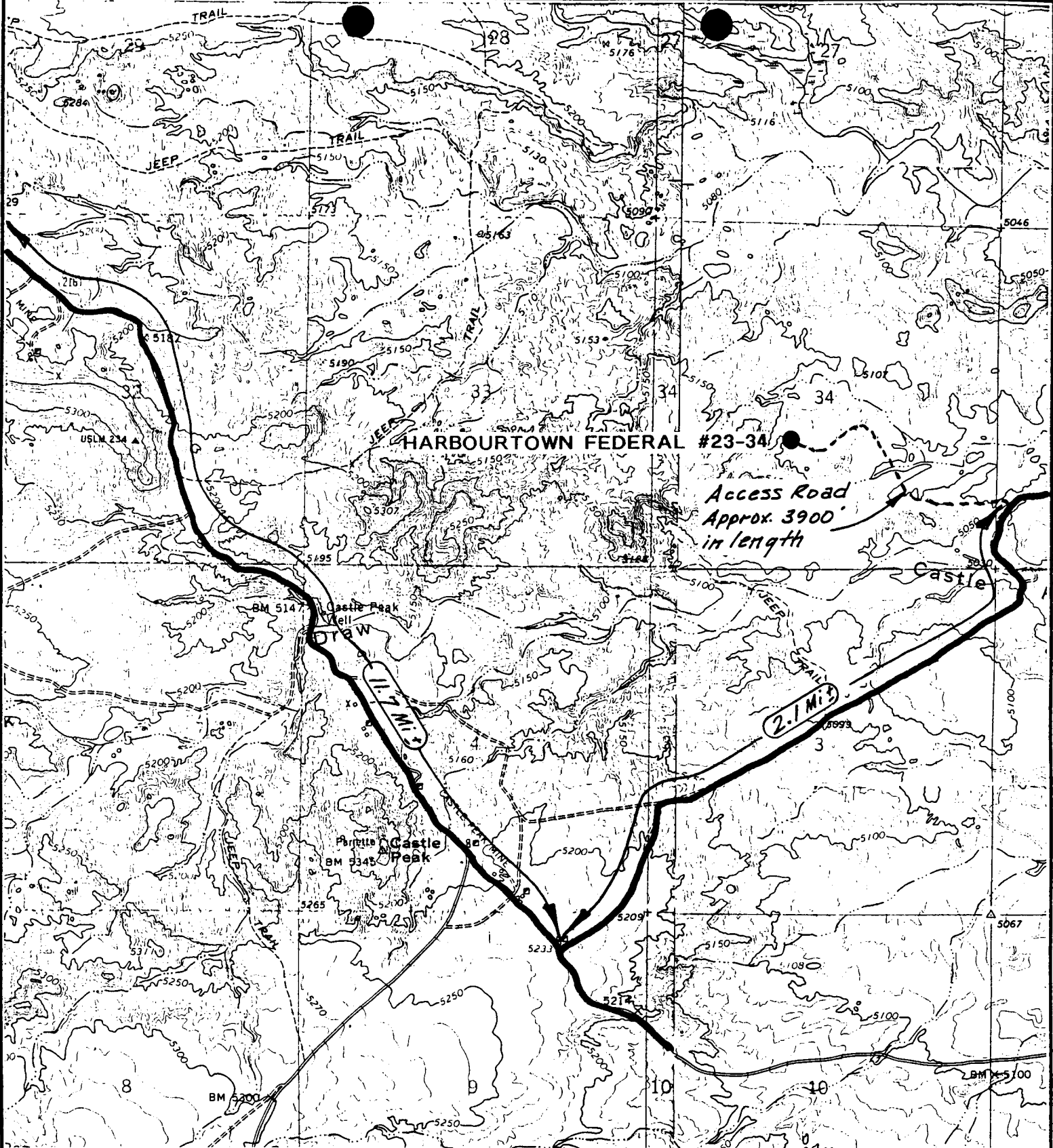
**WILDROSE RESOURCES CORP.**

SECTION 34, T8S, R17E, S.L.B.&M.

HARBOURTOWN FEDERAL #23-34

6 June '97

83-123-035



TOPOGRAPHIC

MAP "B"

SCALE: 1"=2000'

Exhibit 'E-2'



**WILDROSE RESOURCES CORP.**

HARBOURTOWN FEDERAL #23-34  
SECTION 34, T8S, R17E, S.L.B.&M.

6 June '97

83-123-035

# PROPOSED PRODUCTION FACILITY DIAGRAM

VALVE DESCRIPTION		
	DURING PROD.	DURING SALES
VALVE #1	CLOSED	OPEN
VALVE #2	OPEN	CLOSED
VALVE #3	CLOSED	OPEN
VALVE #4	OPEN	CLOSED
VALVE #5	CLOSED	CLOSED
VALVE #6	CLOSED	CLOSED
VALVE #7	CLOSED	OPEN

DIKE

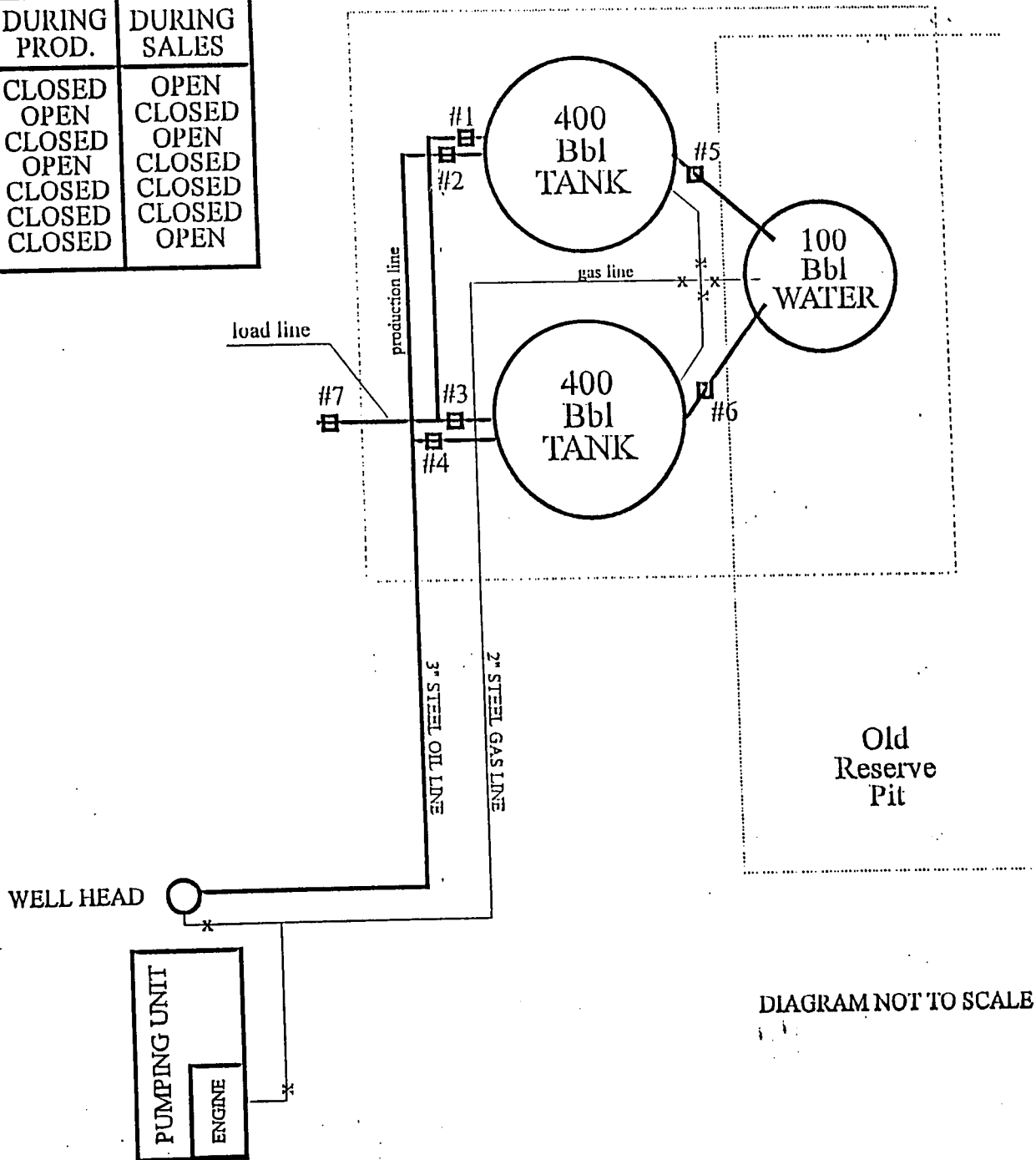


Exhibit 'F'

One mile Radius

Harbour Town Fed. # 23-34  
NE/SW Section 34, T8S, R17E

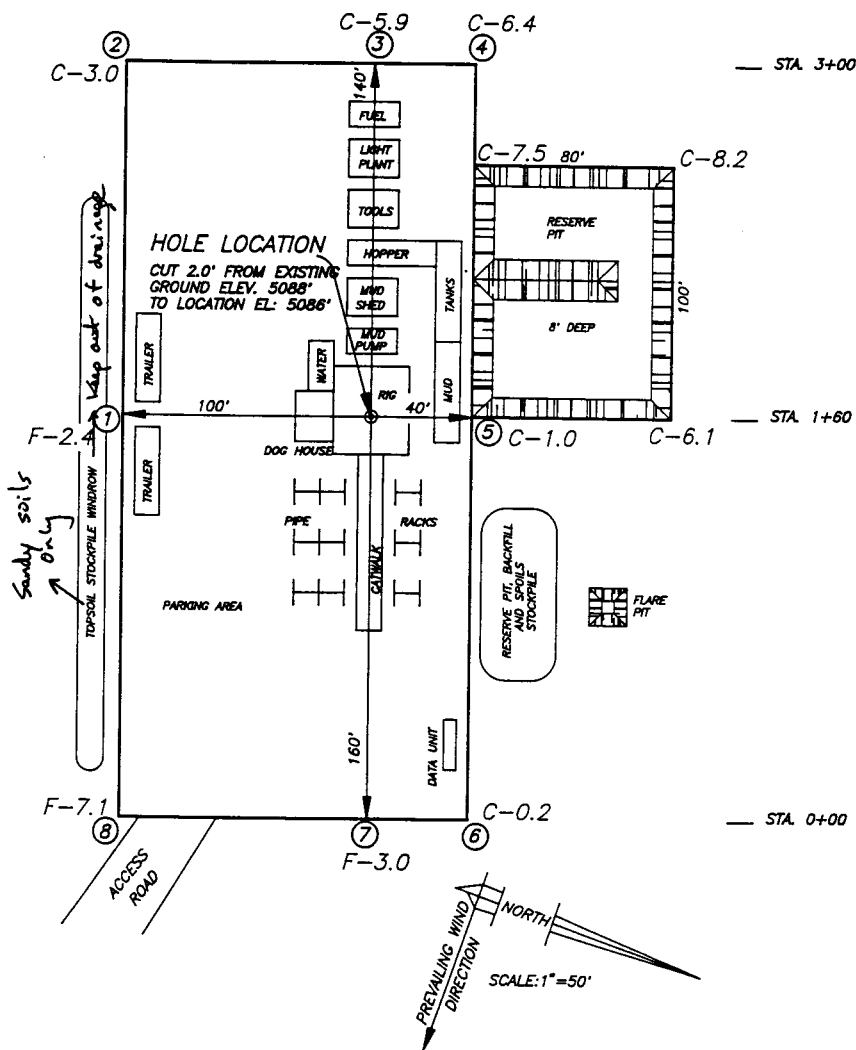
MONUMENT  
BUTTE

Exhibit 'G'

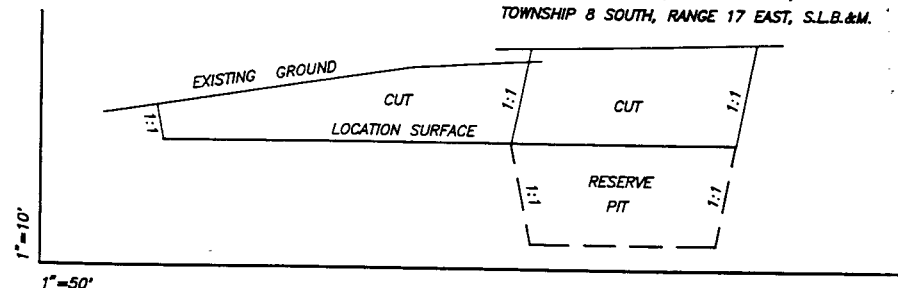
TY  
Y

Erosion Dam  
to the east  
of location

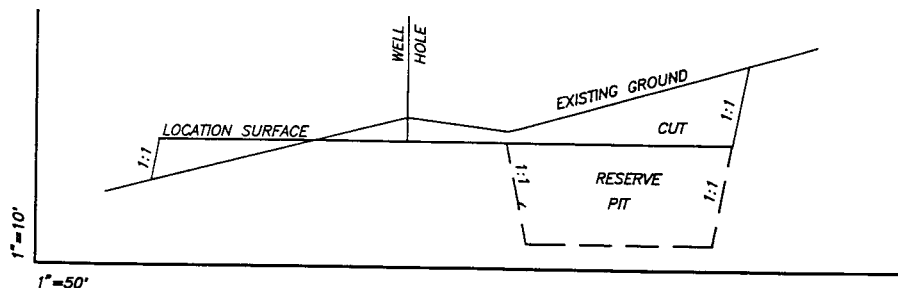
**WILDROSE RESOURCES CORP.**  
**WELL LAYOUT PLAT**  
**HARBOURTOWN FEDERAL #23-34**



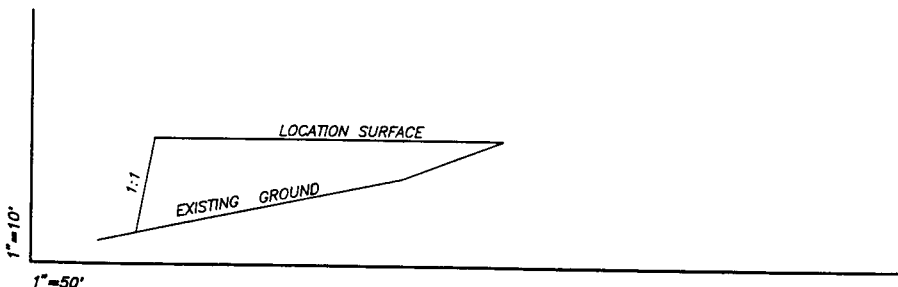
LOCATED IN THE NE1/4 OF THE SW1/4 OF SECTION 34,  
TOWNSHIP 8 SOUTH, RANGE 17 EAST, S.L.B.&M.



STA. 3+00 (2+60 FOR PIT)



STA. 1+60



STA. 0+00

**APPROXIMATE QUANTITIES**

CUT: 6100 CU. YDS. (INCLUDES PIT)  
FILL: 2200 CU. YDS.

5 JUNE 1997

83-123-035

**Exhibit 'H'**

	<b>JERRY D. ALLRED &amp; ASSOCIATES</b>	
	SURVEYING CONSULTANTS	
	121 NORTH CENTER STREET	
	P.O. BOX 975	
		DUCHESNE, UTAH 84021
		(801) 738-5352

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 07/02/97

API NO. ASSIGNED: 43-013-31916

WELL NAME: HARBOURTOWN 23-34  
OPERATOR: WILDROSE RESOURCES (N9660)

PROPOSED LOCATION:

NESW 34 - T08S - R17E  
SURFACE: 1943-FSL-2162-FWL  
BOTTOM: 1943-FSL-2162-FWL  
DUCHESNE COUNTY  
MONUMENT BUTTE FIELD (105)

LEASE TYPE: FED  
LEASE NUMBER: U - 71368

PROPOSED PRODUCING FORMATION: GRRV

INSPECT LOCATION BY: / /

TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

RECEIVED AND/OR REVIEWED:

☒ Plat  
☒ Bond: Federal ☒ State ☐ Fee ☐  
(Number 229352)  
☒ Potash (Y/N)  
☒ Oil shale (Y/N)  
☒ Water permit  
(Number CITY OF MONTON)  
☒ RDCC Review (Y/N)  
(Date: \_\_\_\_\_)

LOCATION AND SITING:

\_\_\_\_ R649-2-3. Unit: \_\_\_\_\_  
☒ R649-3-2. General.  
\_\_\_\_ R649-3-3. Exception.  
\_\_\_\_ Drilling Unit.  
\_\_\_\_ Board Cause no: \_\_\_\_\_  
\_\_\_\_ Date: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

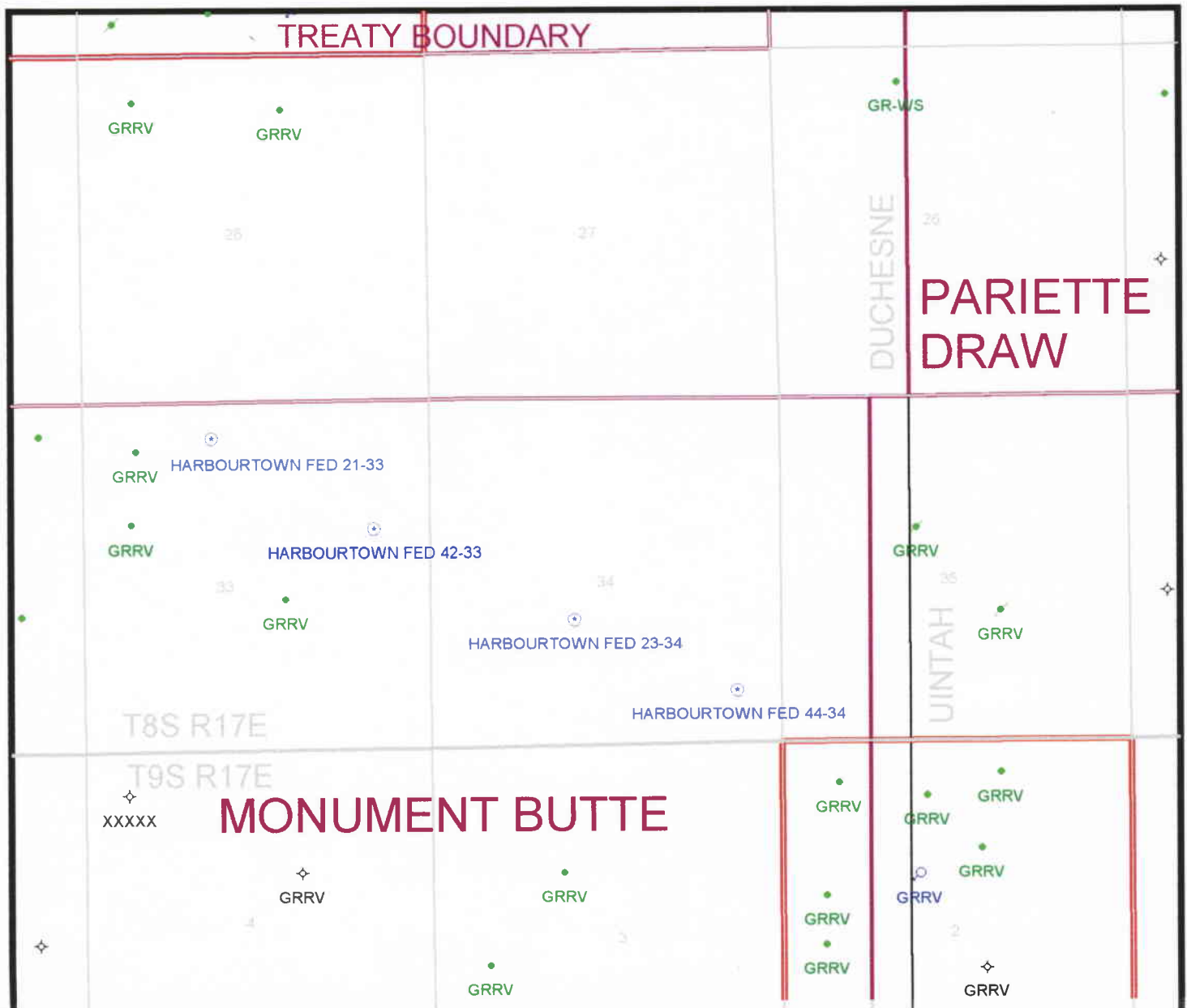
STIPULATIONS: \_\_\_\_\_

OPERATOR: WILDROSE (N9660)

FIELD: MONUMENT BUTTE (105)

SEC, TWP, RNG: SEC. 33&34, T8S, R17E

COUNTY: DUCHESNE UAC: R649-3-2



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL  
WELL ☒

GAS  
WELL ☐

OTHER

SINGLE  
ZONE ☒

MULTIPLE  
ZONE ☐

2. NAME OF OPERATOR

Wildrose Resources Corporation

PH: 303-770-6566

3. ADDRESS OF OPERATOR

4949 South Albion Street, Littleton, CO 80121

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

1943' FSL & 2162' FWL (NE $\frac{1}{4}$ SW $\frac{1}{4}$ )

At proposed prod. zone

Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

12 miles SE of Myton, Utah

15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drlg. unit line, if any)

478'

16. NO. OF ACRES IN LEASE

200

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

40

18. DISTANCE FROM PROPOSED\*

TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

2500'

19. PROPOSED DEPTH

6200'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

5088' GR

22. APPROX. DATE WORK WILL START\*

August 15, 1997

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8"	24#, J-55	300'	225 sx
7-7/8"	5-1/2"	15.5#, J-55	6200'	800 sx

SEE ATTACHED EXHIBITS:

A - Surveyors Plat

B - 10 Point Plan

C - BOP Diagram

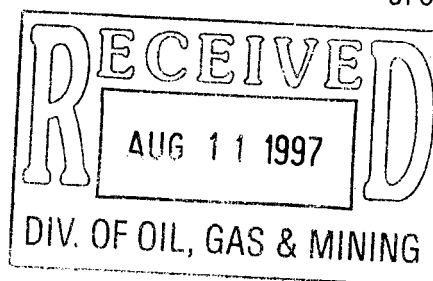
D - 13 Point Surface Use Program

E - Access Road Map

F - Production Facilities

G - Existing Wells Map

H - Pit & Pad Layout, Cuts & Fills,  
Cross Sections, Rig Layout



RECEIVED  
JUL 02 1997

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

*Kary J. Kettner*

TITLE Vice President

DATE June 30, 1997

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

Assistant Field Manager

TITLE Mineral Resources

DATE AUG 06 1997

CONDITIONS OF APPROVAL, IF ANY:

NOTICE OF APPROVAL

UT080-771-330

\*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**CONDITIONS OF APPROVAL**  
**APPLICATION FOR PERMIT TO DRILL**

Company/Operator: Wildrose Resources Corporation

Well Name & Number: Harbourtown Fed. 23-34

API Number: 43-013-31916

Lease Number: U-71368

Location: NESW Sec. 34 T. 08S R. 17E

**NOTIFICATION REQUIREMENTS**

- Location Construction - at least forty-eight (48) hours prior to construction of location and access roads.
- Location Completion - prior to moving on the drilling rig.
- Spud Notice - at least twenty-four (24) hours prior to spudding the well.
- Casing String and Cementing - at least twenty-four (24) hours prior to running casing and cementing all casing strings.
- BOP and Related Equipment Tests - at least twenty-four (24) hours prior to initiating pressure tests.
- First Production Notice - within five (5) business days after new well begins, or production resumes after well has been off production for more than ninety (90) days.

For more specific details on notification requirements, please check the Conditions of Approval for Notice to Drill and Surface Use Program.

## CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Orders, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

Be aware fire restrictions may be in effect when location is being constructed and/or when well is being drilled. Contact the appropriate Surface Management Agency for information.

### A. DRILLING PROGRAM

#### 1. Estimated Depth at Which Oil, Gas, Water, or Other Mineral Bearing Zones are Expected to be Encountered

Report ALL water shows and water-bearing sands to Tim Ingwell of this office **prior to setting the next casing string or requesting plugging orders**. Faxed copies of State of Utah form OGC-8-X are acceptable. If noticeable water flows are detected, submit samples to this office along with any water analyses conducted.

All usable water and prospectively valuable minerals (as described by BLM at onsite) encountered during drilling, will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

#### 2. Pressure Control Equipment

The BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc., for a 2M system and individual components shall be operable as designed. Chart recorders shall be used for all pressure tests.

Test charts, with individual test results identified, shall be maintained on location while drilling and shall be made available to a BLM representative upon request.

If an air compressor is on location and is being utilized to provide air for the drilling medium while drilling, the special drilling requirements in Onshore Oil and Gas Order No. 2, regarding air or gas drilling shall be adhered to. If a mist system is being utilized then the requirement for a deduster shall be waived.

3. Casing Program and Auxiliary Equipment

If conductor pipe is set it shall be cemented to surface. If drive pipe is used it shall be pulled prior to cementing surface casing.

Surface casing shall have centralizers on the bottom three joints, with a minimum of one centralizer per joint.

As a minimum, the usable water and oil shale resources shall be isolated and/or protected by having a cement top for the production casing at least 200 ft. above the top of the usable water zone identified at  $\pm 353$  ft. or by setting the surface casing at  $\pm 403$  ft. If gilsonite is encountered while drilling, it shall be isolated and/or protected via the cementing program.

4. Mud Program and Circulating Medium

Hazardous substances specifically listed by the EPA as a hazardous waste or demonstrating a characteristic of a hazardous waste will not be used in drilling, testing, or completion operations.

No chromate additives will be used in the mud system on Federal and Indian lands without prior BLM approval to ensure adequate protection of fresh water aquifers.

5. Coring, Logging and Testing Program

Daily drilling and completion progress reports shall be submitted to this office on a weekly basis.

All Drill Stem tests (DST) shall be accomplished during daylight hours, unless specific approval to start during other hours is obtained from the AO. However, DSTs may be allowed to continue at night if the test was initiated during daylight hours and the rate of flow is stabilized and if adequate lighting is available (i.e., lighting which is adequate for visibility and vaporproof for safe operations). Packers can be released, but tripping should not begin before daylight unless prior approval is obtained from the AO.

A cement bond log (CBL) will be run from the production casing shoe to **TOP OF CEMENT** if the surface casing is set at  $\pm 403$  ft. or it will be run to  $\pm 200$  ft. if the surface casing is set at  $\pm 300$  ft. and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. **One** copy of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. Samples (cuttings, fluids, and/or gases) will be submitted when requested by the AO.

6. Notifications of Operations

No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the AO. If operations are to be suspended, prior approval of the AO will be obtained and notification given before resumption of operations.

The Vernal District Office shall be notified, during regular work hours (7:45 a.m.-4:30 p.m., Monday through Friday except holidays), at least 24 hours **prior** to spudding the well.

Operator shall report production data to MMS pursuant to 30 CFR 216.5 using form MMS/3160.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported in accordance with the requirements of NTL-3A or its revision.

If a replacement rig is contemplated for completion operations, a "Sundry Notice" (Form 3160-5) to that effect will be filed, for prior approval of the AO, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig.

The date on which production is commenced or resumed will be construed for oil wells as the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which liquid hydrocarbons are first produced into a permanent storage facility, whichever first occurs; and, for gas wells as the date on which associated liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which gas is first measured through permanent metering facilities, whichever first occurs.

Should the well be successfully completed for production, the AO will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than five (5) days following the date on which the well is placed on production.

Gas produced from this well may not be vented or flared beyond an initial authorized test period of 30 days or 50 MMCF following its completion, whichever occurs first, without the prior written approval of the Authorized Officer. Should gas be vented or flared without approval beyond the authorized test period, the operator may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted and the operator shall be required to compensate the lessor for that portion of the gas vented or flared without approval which is determined to have been avoidably lost.

A schematic facilities diagram as required by 43 CFR 3162.7-5 (b.9. d.), and shall be submitted to the appropriate District Office within sixty (60) days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 43 CFR 3162.7-5 (b. 4).

No well abandonment operations will be commenced without the prior approval of the AO. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the AO. A "Subsequent Report of Abandonment" Form 3160-5, will be filed with the AO within thirty (30) days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the AO or his representative, or the appropriate Surface Managing Agency.

7. Other Information

All loading lines will be placed inside the berm surrounding the tank battery.

All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the AO.

The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted following initial installation and at least quarterly thereafter. The AO will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the Vernal District Office. All meter measurement facilities will conform with Onshore Oil & Gas Order No. 4 for liquid hydrocarbons and Onshore Oil & Gas Order No. 5 for natural gas measurement.

The use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3.

There will be no deviation from the proposed drilling and/or workover program without prior approval from the AO. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.

"Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.

Section 102(b)(3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3162.4-1(c), requires that "not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed."

If you fail to comply with this requirement in the manner and time allowed, you shall be liable for a civil penalty of up to \$10,000 per violation for each day such violation continues, not to exceed a maximum of 20 days. See Section 109(c)(3) of the Federal Oil and Gas Royalty Management Act of 1982 and the implementing regulations at Title 43 CFR 3162.4-1(b)(5)(ii).

APD approval is valid for a period of one (1) year from the signature date. An extension period may be granted, if requested, prior to the expiration of the original approval period.

In the event after-hours approval or notification is necessary, please contact one of the following individuals:

Wayne P. Bankert      (801) 789-4170  
Petroleum Engineer

Ed Forsman            (801) 789-7077  
Petroleum Engineer

Jerry Kenczka         (801) 789-1190  
Petroleum Engineer

BLM Fax Machine      (801) 781-4410

## EPA'S LIST OF NONEXEMPT EXPLORATION AND PRODUCTION WASTES

While the following wastes are nonexempt, they are not necessarily hazardous.

- Unused fracturing fluids or acids
- Gas plant cooling tower cleaning wastes
- Painting wastes
- Oil and gas service company wastes, such as empty drums, drum rinsate, vacuum truck rinsate, sandblast media, painting wastes, spent solvents, spilled chemicals, and waste acids
- Vacuum truck and drum rinsate from trucks and drums, transporting or containing nonexempt waste
- Refinery wastes
- Liquid and solid wastes generated by crude oil and tank bottom reclaimers
- Used equipment lubrication oils
- Waste compressor oil, filters, and blowdown
- Used hydraulic fluids
- Waste solvents
- Waste in transportation pipeline-related pits
- Caustic or acid cleaners
- Boiler cleaning wastes
- Boiler refractory bricks
- Incinerator ash
- Laboratory wastes
- Sanitary wastes
- Pesticide wastes
- Radioactive tracer wastes
- Drums, insulation and miscellaneous solids.

## **SURFACE USE PROGRAM**

### **Location Reclamation**

The reserve pit and those portions of the location not needed for production facilities and/or operations shall be reclaimed and recontoured in accordance with the APD.

Stockpiled topsoil shall then be spread over the rehabilitated areas to approximate the original topsoil thickness.

Immediately after spreading, the rehabilitated areas and the remaining topsoil stockpile shall be seeded by drilling with the following seed mixture:

Nuttals saltbush	Atriplex nuttalii v. cuneata	3 lbs/acre
Shadscale	Atriplex confertifolia	3 lbs/acre
Fourwing saltbush	Atriplex canescens	4 lbs/acre
Galleta	Haliaria jamesii	2 lbs/acre

If the seed mixture is to be aerially broadcasted, the pounds per acre shall be doubled. All seed poundages are in Pure Live Seed.

Upon final abandonment if additional recontouring is needed for these areas, the topsoil shall be removed prior to the final recontouring.

Recontour all disturbed areas to blend in appearance with the surrounding terrain.

All topsoil shall be spread over the recontoured surface.

Contact the authorized officer for the BLM at the time of final abandonment for the current, required seed mixture.

### **Soil Erosion**

Due to high erosion potential caused by the development of the location and access road a silt catchment basin is required to be developed. Construct the silt catchment basin in the drainage just east of the well pad, about 300 feet. The location is flagged and the spill way shall be located in a small dip in the ridge just west of where the dam will be placed.



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor

Ted Stewart  
Executive Director

James W. Carter  
Division Director

1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

August 14, 1997

Wildrose Resources Corporation  
4949 South Albion Street  
Littleton, Colorado 80121

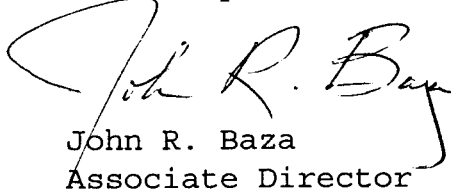
Re: Harbourtown Federal 23-34 Well, 1943' FSL, 2162' FWL, NE SW,  
Sec. 34, T. 8 S., R. 17 E., Duchesne County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-013-31916.

Sincerely,



John R. Baza  
Associate Director

lwp

Enclosures

cc: Duchesne County Assessor

Bureau of Land Management, Vernal District Office

Operator: Wildrose Resources Corporation  
Well Name & Number: Harbourtown Federal 23-34  
API Number: 43-013-31916  
Lease: U-71368  
Location: NE SW Sec. 34 T. 8 S. R. 17 E.

### Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for Permit to Drill.

2. Notification Requirements

Notify the Division within 24 hours following spudding the well or commencing drilling operations. Contact Jim Thompson at (801)538-5336.

Notify the Division prior to commencing operations to plug and abandon the well. Contact John R. Baza (801)538-5334.

3. Reporting Requirements

All required reports, forms and submittals shall be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING  
ENTITY ACTION FORM - FORM 6

OPERATOR Wildrose Resources Corp  
ADDRESS 4949 S. Albion St  
Littleton, CO 80121

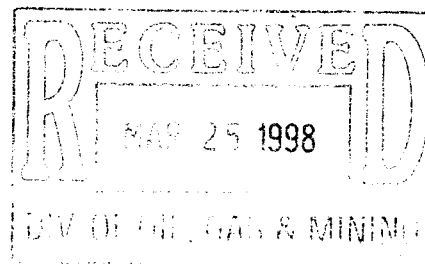
OPERATOR ACCT. NO. N 9660

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	12320	43-013-31916	Harbortown Fed. 23-34	NE/SW	34	8S	17E	Duchesne	3/23/98	
WELL 1 COMMENTS: Entity added 3-26-98. Jec											
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

ACTION CODES (See instructions on back of form)

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.  
(3/89)



Kary Keltner  
Signature V.P. Date 3/24/98  
Title  
Phone No. (303) 770-6566

DIVISION OF OIL, GAS AND MINING

**CONFIDENTIAL**

SPUDDING INFORMATION

Name of Company: WILD ROSE RESOURCES

Well Name: HARBOUR TOWN 23-34

Api No. 43-013-31916

Section 34 Township 8S Range 17E County DUCHESNE

Drilling Contractor UNION

Rig # 7

SPUDDED:

Date 3/25/98

Time

How ROTARY

Drilling will commence

Reported by CARY

Telephone #

Date: 3/25/98 Signed: JLT

✓

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: September 30, 1990

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals

**SUBMIT IN TRIPLICATE**

**CONFIDENTIAL**

1. Type of Well  
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator  
Wildrose Resources Corp.

3. Address and Telephone No.  
3121 Cherryridge Road, Englewood, CO 80110 303-761-9965

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
1943' FSL & 2162' FWL NE $\frac{1}{4}$ SW $\frac{1}{4}$   
Section 34, T8S, R17E

5. Lease Designation and Serial No.

U-76955

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Harbour Town Fed. 23-34

9. API Well No.

43-013-31916

10. Field and Pool, or Exploratory Area

Monument Butte

11. County or Parish, State

Duchesne County, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

- ☐ Notice of Intent  
☒ Subsequent Report  
☐ Final Abandonment Notice

TYPE OF ACTION

- ☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☒ Other

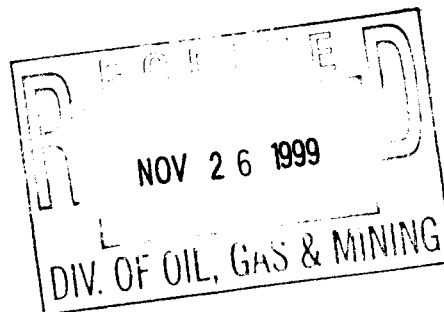
- ☐ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection

Well Status

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Production casing was set on this well on March 29, 1998 and the well is now waiting on completion. Anticipated completion date is first half of the year 2000. Enclosed is a copy of the daily drilling reports.



14. I hereby certify that the foregoing is true and correct

Signature

Title

V.P.

Date

11/20/99

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

DAILY DRILLING REPORT

CONFIDENTIAL

Operator: Wildrose Resources Corporation  
Well: #23-34 Harbourtown Federal  
T 8 S, R 17 E, Section 34  
NE SW (1943' FSL, 2162' FWL)  
Duchesne County, Utah  
Elevation: GR: 5088', KB: 5098' estimated  
Contractor: Union Drilling Rig #7

03/24/98 Day 1: TD-317'. WOC. MI & RU Union Rig #7. Drld 17 1/2" hole to 15'. Set 15' 13 3/8" conductor pipe. Drld 12 1/2" hole to 317' w/ Bit #2. Ran 7 jts (288') 8 5/8", 24#, J-55 csg w/ guide shoe & 3 centralizers. Set csg @ 298' KB. RU HOWCO. Pumped 5 BW & 20 bbl gel water. Cemented w/ 150 sx Class 'G' w/ 2% CaCl<sub>2</sub> & 1/4 #/sk Flocele. Plug down @ 2:00 AM 3/24/98. Had good cement to surface.

03/25/98 Day 2: TD-1642' drlg. Drld 1325' in 17 hrs w/ air/foam. NUBOP's. Tested BOP to 2000 psi, csg to 1500. Ran Bit #3: 7 7/8" HTC GT28 @ 317'. Survey: 0 @ 661', 1/2 @ 1200'.

03/26/98 Day 3: TD-3504' drlg. Drld 1862' in 22 1/2 hrs w/ air/foam. Bit #3 has drld 3187' in 39 1/4 hrs. Surveys: 1/2 @ 1704', 3/4 @ 2203', 3/4 @ 2630', 3/4 @ 3168'.

03/27/98 Day 4: TD-4464' drlg. Drld 960' in 17 hrs w/ 2% KCl substitute. Pulled Bit #3 @ 4010'. Bit #3 drld 3693' in 46 1/2 hrs. Ran Bit #4: 7 7/8" NT3M @ 4010' w/ mud motor. Bit #4 has drld 454' in 9 3/4 hrs. Surveys: 1 @ 3727', 1 @ 4300'.

03/28/98 Day 5: TD-5459' drlg. Drld 995' in 23 hrs w/ 2% KCl substitute. Bit #4 has drld 1449' in 32 3/4 hrs. Surveys: 1 1/4 @ 4874', 1 1/4 @ 5367'.

03/29/98 Day 6: TD-5900' logging. Drld 441' in 11 1/4 hrs w/ 2% KCl substitute. Reached TD @ 5:15 PM 3/28/98. Pulled Bit #4 @ 5900'. Bit #4 drld 1890' in 44 hrs. RU Halliburton Wireline to log as follows:

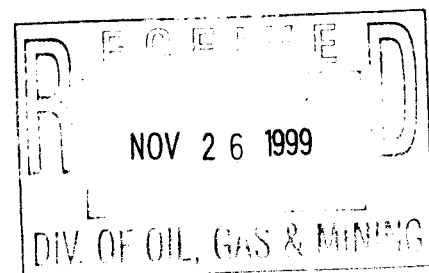
DLL 5877' - surface'  
SDL-DSN 5853' - 4000'

Logger's TD - 5896'.

03/30/98 Day 7: TD-5900'. PBTD-5833'. WOC. Ran 5 1/2" csg as follows:

Guide shoe  
1 joint 5 1/2". 15.5#, J-55, LTC  
Float collar  
134 jts 5 1/2", 15.5#, J-55, LTC

w/ 10 centralizers. Set csg @ 5880'. Circulated for 1/2 hr. RU HOWCO. Pumped 10 BW & 20 bbl gel water. Cemented w/ 150 sx Hifill cement & 320 sx 50/50 Poz w/ 2% gel, 10% salt, 0.5% Halad 322. Displaced w/ 139 bbl water w/ Clayfix @ 6-7 BPM. Bumped plug w/ 1600 psi. Plug down @ 11:50 AM 3/29/98. Pulled BOP's. Set slips. Released rig @ 2:00 PM 3/29/98. Drop from report pending completion.



STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING  
OIL AND GAS PROGRAM

PHONE CONVERSATION DOCUMENTATION FORM

☐ Copy? ☐

Conversation Pertains to:

☒ **WELL** HARBOURTOWN FED 23-34

☐ **OTHER**

Section 34 Township 08S Range 17E

API Number 43-013-31916

**Topic of Conversation:** NEED WELL COMPLETION OR RECOMPLETION REPORT AND LOG (FORM 8)

Date of Phone Call: 11/4/2003

Time: 3:00 pm

DOGM Employee (name): CAROL DANIELS

☐ Initiated Call? ☒

Spoke with:

Name: \_\_\_\_\_

☐ Initiated Call? ☐

Of (company/organization): WILDROSE RESOURCES CORP Phone: (303) 761-9965

Highlights of Conversation:

A FEMALE ANSWERED THE TELEPHONE. I IDENTIFIED MYSELF AND WHOM I WORK FOR AND TOLD HER I NEVER RECEIVED A WELL COMPLETION REPORT (WCR) FOR THIS WELL. SHE ASKED ME FOR THE WELL NUMBERS I NEEDED THE WCR'S FOR AND I GAVE THEM TO HER. SHE RESPONDED BACK WITH "WELL THEY WERE GONE AND WOULDN'T BE BACK FOR A WEEK". I GAVE HER MY TELEPHONE NUMBER AND ASKED HER WHO WOULD BE CALLING ME BACK. SHE JUST SAID, "I'VE GOT OTHER CALLS COMING IN" AND HUNG UP. I NEVER DID GET HER NAME OR A NAME FOR ANYONE WHO WOULD BE CONTACTING ME.

## NOTICE

Utah Oil and Gas Conservation General Rule R649-3-21 states that,

- A well is considered completed when the well has been adequately worked to be capable of producing oil or gas or when well testing as required by the division is concluded.
- Within 30 days after the completion or plugging of a well, the following shall be filed:
  - Form 8, Well Completion or Recompletion Report and Log
  - A copy of electric and radioactivity logs, if run
  - A copy of drillstem test reports,
  - A copy of formation water analyses, porosity, permeability or fluid saturation determinations
  - A copy of core analyses, and lithologic logs or sample descriptions if compiled
  - A copy of directional, deviation, and/or measurement-while-drilling survey for each horizontal well

Failure to submit reports in a timely manner will result in the issuance of a Notice of Violation by the Division of Oil, Gas and Mining, and may result in the Division pursuing enforcement action as outlined in Rule R649-10, Administrative Procedures, and Section 40-6-11 of the Utah Code.

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As of the mailing of this notice, the division has not received the required reports for

Operator: WILDROSE RESOURCES CORPORATION Today's Date: 11/07/2003

Well:	API Number:	Drilling Commenced:
HARBOURTOWN FED 23-34	4301331916	03/23/1998
RIVIERA FED 3-10	4301332184	09/03/2002
RIVIERA FED 3-9	4301332183	09/04/2002

To avoid compliance action, required reports should be mailed within 7 business days to:

Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

If you have questions or concerns regarding this matter, please call (801) 538-5284.

cc: **Well File**  
Compliance File

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

(See other in-  
structions on  
reverse side)Form approved,  
Budget Bureau No. 42-R855.5.

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG \*

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other ☐

b. TYPE OF COMPLETION:

NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other ☐

2. NAME OF OPERATOR

Wildrose Resources Corp.

3. ADDRESS OF OPERATOR

3121 Cherryridge Rd, Englewood, CO 80113

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)

At surface 1943' FSL &amp; 2162' FWL (NE 1/4)

At top prod. interval reported below Same

At total depth

Same

14. PERMIT NO.

43-013-31916

DIV. OF OIL, GAS &amp; MIN.

DIP. OF ISSUED

7. UNIT AGREEMENT NAME

5. FARM OR LEASE NAME

Harbourtown Federal

8. WELL NO.

23-34

10. FIELD AND POOL, OR WILDCAT

Monument Butte

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec. 34, T8S, R17E

12. COUNTY OR PARISH

Duchesne

13. STATE

Utah

15. DATE SPUDDED

3/23/98

16. DATE T.D. REACHED

3/28/98

17. DATE COMPL. (Ready to prod.)

11/26/03

18. ELEVATIONS (DF, REB, RT, GR, ETC.)\*

5088' GR

19. ELEV. CASINGHEAD

5088'

20. TOTAL DEPTH, MD &amp; TVD

5900'

21. PLUG, BACK T.D., MD &amp; TVD

5832'

22. IF MULTIPLE COMPL., HOW MANY\*

-

23. INTERVALS DRILLED BY

→

ROTARY TOOLS

10'-TD

CABLE TOOLS

-

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\*

5088' - 5704' Green River

25. WAS DIRECTIONAL SURVEY MADE

No

26. TYPE ELECTRIC AND OTHER LOGS RUN

DLL, SDL-DSN, CBL-Rec. 12-11-03

27. WAS WELL CORED

No

28. CASING RECORD (Report all strings set in well)

CASINO SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24	298'	12 1/4"	150 SX (to surface)	-
5 1/2"	15.5	5880'	7 7/8"	470 SX	-

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
N/A					2 7/8"	5710'	-

31. PERFORATION RECORD (Interval, size and number)

5695' - 5704' .5" holes 36 holes

5088' - 5095' .5" holes 28 holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)

5695' - 5704'

5088' - 5095'

AMOUNT AND KIND OF MATERIAL USED

60547 #20/40, 562 bbl fluid

75783 #20/40, 610 bbl fluid

33. PRODUCTION

DATE FIRST PRODUCTION 11/28/03		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Pumping - beam				WELL STATUS (Producing or shut-in) Producing	
DATE OF TEST 12/2/03	HOURS TESTED 24	CHOKE SIZE —	PROD'N. FOR TEST PERIOD →	OIL—BBL. 74	GAS—MCF. 20	WATER—BBL. 0	GAS-OIL RATIO 270
FLOW. TUBING PRESS. —	CASING PRESSURE 200	CALCULATED 24-HOUR RATE →	OIL—BBL. 74	GAS—MCF. 20	WATER—BBL. 0		OIL GRAVITY-API (CORR.) 32.0

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Sold, used for fuel

TEST WITNESSED BY

E. Wilcken

35. LIST OF ATTACHMENTS

Logs, Daily Reports

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

12/4/03 [Signature]

TITLE

V.P.

DATE

12/4/03

\*(See Instructions and Spaces for Additional Data on Reverse Side)

## INSTRUCTIONS

**General:** This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions. If not filed prior to the time this summary record is submitted, copies of all summary reports shall be submitted with this summary record.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

**Item 4:** If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

**Item 18:** Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

**Items 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

**Item 33:** Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

### 37. SUMMARY OF POROUS ZONES:

SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.

**38.**

## GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Green River	1567'	1567'
Douglas Creek	4812'	4812'

## DAILY DRILLING REPORT

Operator: Wildrose Resources Corporation  
Well: #23-34 Harbourtown Federal  
T 8 S, R 17 E, Section 34  
NE SW (1943' FSL, 2162' FWL)  
Duchesne County, Utah  
Elevation: GR: 5088', KB: 5098' estimated  
Contractor: Union Drilling Rig #7

CONFIDENTIAL

03/24/98 Day 1: TD-317'. WOC. MI & RU Union Rig #7. Drld 17 1/2" hole to 15'. Set 15' 13 3/8" conductor pipe. Drld 12 1/2" hole to 317' w/ Bit #2. Ran 7 jts (288') 8 5/8", 24#, J-55 csg w/ guide shoe & 3 centralizers. Set csg @ 298' KB. RU HOWCO. Pumped 5 BW & 20 bbl gel water. Cemented w/ 150 sx Class 'G' w/ 2% CaCl<sub>2</sub> & 1/4 #/sk Flocele. Plug down @ 2:00 AM 3/24/98. Had good cement to surface.

03/25/98 Day 2: TD-1642' drlg. Drld 1325' in 17 hrs w/ air/foam. NUBOP's. Tested BOP to 2000 psi, csg to 1500. Ran Bit #3: 7 7/8" HTC GT28 @ 317'. Survey: 0 @ 661', 1/2 @ 1200'.

03/26/98 Day 3: TD-3504' drlg. Drld 1862' in 22 1/2 hrs w/ air/foam. Bit #3 has drld 3187' in 39 1/4 hrs. Surveys: 1/2 @ 1704', 3/4 @ 2203', 3/4 @ 2630', 3/4 @ 3168'.

03/27/98 Day 4: TD-4464' drlg. Drld 960' in 17 hrs w/ 2% KCl substitute. Pulled Bit #3 @ 4010'. Bit #3 drld 3693' in 46 1/2 hrs. Ran Bit #4: 7 7/8" NT3M @ 4010' w/ mud motor. Bit #4 has drld 454' in 9 3/4 hrs. Surveys: 1 @ 3727', 1 @ 4300'.

03/28/98 Day 5: TD-5459' drlg. Drld 995' in 23 hrs w/ 2% KCl substitute. Bit #4 has drld 1449' in 32 3/4 hrs. Surveys: 1 1/4 @ 4874', 1 1/4 @ 5367'.

03/29/98 Day 6: TD-5900' logging. Drld 441' in 11 1/4 hrs w/ 2% KCl substitute. Reached TD @ 5:15 PM 3/28/98. Pulled Bit #4 @ 5900'. Bit #4 drld 1890' in 44 hrs. RU Halliburton Wireline to log as follows:

DLL 5877' - surface'  
SDL-DSN 5853' - 4000'

Logger's TD - 5896'.

03/30/98 Day 7: TD-5900'. PBTD-5833'. WOC. Ran 5 1/2" csg as follows:

Guide shoe  
1 joint 5 1/2". 15.5#, J-55, LTC  
Float collar  
134 jts 5 1/2", 15.5#, J-55, LTC

w/ 10 centralizers. Set csg @ 5880'. Circulated for 1/2 hr. RU HOWCO. Pumped 10 BW & 20 bbl gel water. Cemented w/ 150 sx Hifill cement & 320 sx 50/50 Poz w/ 2% gel, 10% salt, 0.5% Halad 322. Displaced w/ 139 bbl water w/ Clayfix @ 6-7 BPM. Bumped plug w/ 1600 psi. Plug down @ 11:50 AM 3/29/98. Pulled BOP's. Set slips. Released rig @ 2:00 PM 3/29/98. Drop from report pending completion.

# Daily Completion Reports

CONFIDENTIAL

Harbourtown Federal #23-34  
NE/SW Section 34, T8S, R17E  
Duchesne County, Utah

11/8/03

RU Cutter Wireline Service w/ mast truck. Run CBL from 5794' to 4000' and found cement top @ 1140'. RD Cutters.

11/18/03

Day 1: RU Pennant Service rig. NU BOP's. PU 23 jts used J-55 tbgs. Having trouble drifting due to scale. Lay down 23 jts used J-55 tbgs. PU & ran 4-3/4" bit and 5-1/2" csg scraper on 91 jts new 2-7/8", J-55, 6.5# tbgs. SDFN.

11/19/03

Day 2: PU & ran 25 jts new 2-7/8" J-55, 6.5# tbgs. PU & ran 65 jts used Yellow band 2-7/8", L-80, 6.5# tbgs. Tagged @ 5832. Circulated bottoms up tbgs w/ 40 bbl 2% KCl water. Pressure tested csg & BOP to 3400 psi w/ rig pump - okay. POH w/ 181 jts tbgs. RU Cutters Wireline Service. Perforated Lower Douglas Creek sand from 5695' - 5704' w/ 4 jspfs (36 holes) using 4" casing gun. RD Cutters. Using rig pump broke down LDC zone w 5 bbl 2% KCl water down csg. Zone broke @ 3400 psi @ 1 BPM. Increased to 2 BPM @ 1800 psi. SIFN.

11/20/03

Day 3: TIH w/ NC & SN on 178 jts tbgs to 5728'. RU to swab. FL @ surface. Swabbed well down to 5300'. Recov approx 116 BW w/ trace of oil. POH w/ tbgs. SIFN.

11/21/03

Day 4: CP = 50 psi. RU BJ Services to frac down 5-1/2" csg as follows:

Volume	Event	Rate	ATP
250 gal	15% HCL acid	--	--
7266 gal	Pad - 20# Lightning Gel	24 BPM	2050 psi
3000	1-3 ppg 20/40	24	1850
6000	3-6.5 ppg 20/40	24	1660
2300	6.5-8 ppg 20/40	24	1620
588	Flush - slick water w/ Clatreat	24	1690
252	Flush - 15% HCL acid	24	1710
4788	Flush - slick water w/ Clatreat	24	1780

Formation broke @ 3200 psi. Frac volumes: 562 bbl water. 60547# 20/40 sand. ISIP = 1850 psi. RU Cutters Wireline Service. Ran Weatherford HE BP on wireline. Se BP @ 5150'. Bled off pressure. Using dump bailer on wireline, placed 1 sk sand on BP. Perforated "Blue" sand from 5088' - 5095' w/ 4jsps (28 holes) using 4" csg gun. Hook up BJ Services to frac down 5-1/2" csg. Zone would not bread w/ max pressure of 3950 psi. Using Cutters wireline dump bailer, spotted 10 gal 28% HCL acid across perms. RD Cutters. RU BJ to frac down 5-1/2" csg as follows:

Volume	Event	Rate	ATP
7014 gal	Pad - 20 # Lightning Gel	26 BPM	2340 psi
3625	1-3 ppg 20/40	26	2260
7250	3-6.5 ppg 20/40	26	1890
2700	6.5-8 ppg 20/40	26	1590
5040	Flush - slickwater w/ Clatreat	26	1760

Formation broke @ 3300 psi. Frac volumes: 610 bbl water, 75783 # 20/40 sand. ISIP = 1800 psi. Start flow back immediately. Flowed back 200 BLW in 3-1/2 hrs. SIFN. 972 BLWTR.

11/22/03

Day 5: CP = 160 psi. Flowed back approx 5 BLW w/ trace of oil in 1/2 hr. PU & ran BP retrieving head on 157 jts tbg. Tag sand @ 5096'. Circulate of sand to BP @ 5150'. Circulate clean. Release BP. Lower zone flowing. POH w/ BP. Displace and flowed approx 50 BLW while retrieving BP. SDFN due to high winds. 917 BLWTR.

11/23/03

Day 6: CP = 150 psi. Bled off pressure in 1 minute. TIH w/ NC and SN, 2 - 6' pup jts and 179 jts tbg. Tagged sand @ 5685'. Circulated out sand to PBTD @ 5733'.. Circulate clean for 30 min. Pulled 13 stds. EOT @ 5022'.. RU to swab. FL @ surface. Swabbed 155 BF (est 145 BLW & 10BO) in 3-1/2 hrs. Final FL @ 1000'. Final oil cut est @ 30% with strong gas blow. SIFN. 772 BLWTR.

11/24/03

Shut down for Sunday.

11/25/03

Day 7: TP = 200 psi, CP = 20 psi. Opened tubing. Flowed approx 15 BO in 1 hr and died. RU to swab. FL @ 500'. Made 3 swab runs. Recov 57 BF (est 32 BLW & 25 BO). Final FL @ 1600' w/ good gas. RD swab. Ran 13 stds tbg to 5733' - no tag. Lay down 4 jts L-80 tbg. POH w/ 31 stds tbg. Tubing kicking. Circulated hole w/ 100 bbl 2% KCL water. Circulated out approx 15 BO. POH w/ tbg. Ran NC, 1 jt J-55 tbg, 4' perf sub, SN, 20 jts J-55 tbg, TAC, 95 jts J-55 tbg and 61 jts L-80 tbg. Strip off BOP's. Set TAC w/ 12,000 # tension. EOT @ 5710', SN @ 5671', TAC @ 5009'. SIFN. 770 BLWTR.

11/26/03

Day 8: TP = 0, CP = 0. Flushed tbg w/ 35 bbl hot load water. Circulated back approx 20 BLW. RU to run rods. Run 2-1/2" x 1-1/2" x 12' x 16' RHAC pump, 225 - 3/4" rods, 1 - 6' x 3/4" pony and 1 - 22' x 1-1/2" polished rod. With hot oiler load tbg with 10 BLW. Pressured to 1000 psi. Release pressure to 500 psi. Long stroke pump to 1000 psi. Release pressure. Hung well off. RD & MO Pennant Service. 795 BLWTR. Start up well @ 5PM 11/26/03. 74" stroke & 6 SPM.

11/27/03 Pumped 50 BLW in 15 hrs.

11/28/03 Pumped 96 BLW in 24 hrs. CP = 200 psi. 665 BLWTR.

11/29/03 Pumped 69 BO & 26 BLW in 24 hrs. CP = 150 psi. 625 BLWTR.

Harbourtown Federal #23-34 Daily Completion Reports (cont.)

CONFIDENTIAL

11/30/03	Pumped 130 BO & 30 BLW in 24 hrs. CP = 200 psi. 605 BLWTR.
12/01/03	Pumped 100 BO & 20 BLW in 24 hrs. CP = 230 psi. 585 BLWTR.
12/02/03	Pumped 74 BO & 6 BLW in 24 hrs. CP = 200 psi. 579 BLWTR.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED

Budget Bureau No. 1004-0135

Expires March 31, 1993

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT -" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☒ Oil Well    ☐ Gas well    ☐ Other

2. Name of Operator

INLAND PRODUCTION COMPANY

3. Address and Telephone No.

1401 17TH STREET, SUITE 1000, DENVER, CO 80202 (303)893-0102

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

5. Lease Designation and Serial No.

See Attached Exhibit

6. If Indian, Allottee or Tribe Name

7. If unit or CA, Agreement Designation

8. Well Name and No.

See Attached Exhibit

9. API Well No.

See Attached Exhibit

10. Field and Pool, or Exploratory Area

11. County or Parish, State

Uintah Co., Utah

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent☐ Abandonment☐ Change of Plans☐ Subsequent Report☐ Recompletion☐ New Construction☐ Final Abandonment Notice☐ Plugging Back☐ Non-Routine Fracturing☐ Casing repair☐ Water Shut-off☐ Altering Casing☐ Conversion to Injection☒ Other Change of Operator☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work)


Effective 4/15/04, Inland Production Company, as Contract Operator, will take over operations of the attached referenced wells.  
The previous operator was:

Wildrose Resources Corporation  
3121 Cherryridge Road  
Englewood, Colorado 80110-6007

Effective 4/15/04, Inland Production Company, as Contract Operator, is responsible under the terms and conditions of the leases for operations conducted on the leased lands or a portion thereof under BLM Bond No. UT0056 issued by Hartford.

I hereby certify that the foregoing is true and correct. (Current Contract Operator)

Signed

  
Bill I. Pennington

Title


President, Inland Production Company

Date

4/15/04

(This space of Federal or State office use.)

Approved by



Title

Petroleum Engineer

Date

5/20/04

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly to make to any department of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*See Instruction on Reverse Side

**EXHIBIT "A"**  
Attached to Sundry Notices

Wildrose Resources Corporation  
and  
Inland Production Company

Unit	API	Well	Comp	Elev	Loc	S	1/4	Twp	Rng	Co	Lease	Type
N	4304731528	REX LAMB 34-1	WR	4932* GR	2116 FNL 2132 FEL	34	SWNE	040S	010E	UTA	FEE	OW
N	4304731692	REX LAMB 34-2	WR	4932* GR	2018 FNL 1068 FEL	34	SENE	040S	010E	UTA	FEE	OW
N	4301331914	HARBOURTOWN FED 21-33	WR	5129* GR	0513 FNL 1938 FWL	33	NENW	080S	170E	DU	U-71368	OW
N	4301331915	HARBOURTOWN FED 42-33	WR	5128* GR	1954 FNL 0851 FEL	33	SENE	080S	170E	DU	U-71368	OW
N	4301331916	HARBOURTOWN FED 23-34	WR	5088* GR	1943 FSL 2162 FWL	34	NESW	080S	170E	DU	U-71368	OW
N	4301331917	HARBOURTOWN FED 44-34	WR	5063* GL	0835 FSL 0500 FEL	34	SESE	080S	170E	DU	U-71368	OW
N	4304732080	FEDERAL #23-26	WR	4910* KB	2113 FSL 1844 FWL	26	NESW	080S	180E	UTA	U-36442	OW
N	4304732700	FEDERAL 24-26	WR	4913* GR	0660 FSL 1980 FWL	26	SESW	080S	180E	UTA	U-36442	OW
N	4304732720	FEDERAL 13-26	WR	4905* GR	2018 FSL 0832 FWL	26	NWSW	080S	180E	UTA	U-36442	OW
N	4304732731	FEDERAL 12-26	WR	4924* GR	2956 FSL 0470 FWL	26	SWNW	080S	180E	UTA	U-36442	GW
N	4304732847	FEDERAL 34-26	WR	4907* GR	0741 FSL 1957 FEL	26	SWSE	080S	180E	UTA	U-75532	OW
N	4304732732	FEDERAL 43-27	WR	4862* GR	1917 FSL 0559 FEL	27	NESE	080S	180E	UTA	U-36442	OW
N	4304732733	FEDERAL 14-28	WR	4902* GR	0860 FSL 0846 FWL	28	SWSW	080S	180E	UTA	U-51081	OW
N	4304732743	FEDERAL 13-28	WR	4955* GR	2007 FSL 0704 FWL	28	NWSW	080S	180E	UTA	U-36442	OW
N	4304731464	PARIETTE FED 10-29	WR	4890* GR	1843 FSL 2084 FEL	29	NWSE	080S	180E	UTA	U-51081	OW
N	4304731550	W PARIETTE FED 6-29	WR	4892* GR	1978 FNL 2141 FWL	29	SENW	080S	180E	UTA	U-36846	OW
N	4304732079	FEDERAL 44-29	WR	4993* KB	0660 FSL 0660 FEL	29	SESE	080S	180E	UTA	U-51081	OW
N	4304732701	FEDERAL 43-29	WR	4886* GR	1904 FSL 0710 FEL	29	NESE	080S	180E	UTA	U-51081	OW
N	4304732742	FEDERAL 34-29	WR	4917* GR	0712 FSL 1925 FEL	29	SWSE	080S	180E	UTA	U-51081	OW
N	4304732848	PARIETTE FED 32-29	WR	4870* GR	1942 FNL 1786 FEL	29	SWNE	080S	180E	UTA	U-36846	OW
N	4304731116	NGC ST 33-32	WR	4930* GR	1914 FSL 1911 FEL	32	NWSE	080S	180E	UTA	ML-22058	OW
N	4304732077	FEDERAL 12-34	WR	4845* KB	1571 FNL 0375 FWL	34	SWNW	080S	180E	UTA	U-51081	OW
N	4304732702	FEDERAL 42-35	WR	4815* GR	1955 FNL 0463 FEL	35	SENE	080S	180E	UTA	U-51081	OW
N	4304732721	FEDERAL 43-35	WR	4870* GR	2077 FSL 0696 FEL	35	NESE	080S	180E	UTA	U-49430	OW
N	4304731345	GULF STATE 36-13	WR	4831* GR	1850 FSL 0600 FWL	36	NWSW	080S	180E	UTA	ML-22057	OW
N	4304731350	GULF STATE 36-11	WR	4837* GR	0677 FNL 0796 FWL	36	NWNW	080S	180E	UTA	ML-22057	OW
N	4304731864	GULF STATE 36-12	WR	4882* GR	1778 FNL 0782 FWL	36	SWNW	080S	180E	UTA	ML-22057	OW
N	4304731892	GULF STATE 36-22	WR	4923* GR	1860 FNL 1980 FWL	36	SENW	080S	180E	UTA	ML-22057	OW
N	4304732580	UTD STATE 36-K	WR	4809* GR	2120 FSL 1945 FWL	36	NESW	080S	180E	UTA	ML-22057	OW
N	4304732581	UTD STATE 36-M	WR	4744* KB	0848 FSL 0648 FWL	36	SWSW	080S	180E	UTA	ML-22057	OW
N	4304731415	WILDROSE FEDERAL 31-1	WR	4871* GR	2051 FSL 0683 FWL	31	NWSW	080S	190E	UTA	U-30103	OW
N	4301330642	MONUMENT BUTTE 1-3	WR	5156* GR	1945 FSL 0816 FWL	03	NWSW	090S	170E	DU	U-44004	OW
N	4301330810	MONUMENT BUTTE 2-3	WR	5107* GR	1918 FNL 1979 FWL	03	SENW	090S	170E	DU	U-44004	OW
N	4301331760	PINEHURST FEDERAL 3-7	WR	5096* GR	2062 FNL 1999 FEL	03	SWNE	090S	170E	DU	61252	OW
N	4301331761	PINEHURST FEDERAL 3-8	WR	5030* GR	1980 FNL 0660 FEL	03	SENE	090S	170E	DU	61252	OW
N	4301331764	RIVIERA FEDERAL 3-11	WR	5123* GR	2050 FSL 2008 FWL	03	NESW	090S	170E	DU	U-44004	OW
N	4301332183	RIVIERA FED 3-9	WR	5030 GR	1922 FSL 0605 FEL	03	NESE	090S	170E	DU	U-44004	OW
N	4301332184	RIVIERA FED 3-10	WR	5108 GR	2100 FSL 2190 FEL	03	NWSE	090S	170E	DU	U-44004	OW
N	4301331023	FEDERAL 15-1-B	WR	5177* GR	0660 FNL 1983 FEL	15	NWNE	090S	170E	DU	U-44429	OW
N	4304732777	BIRKDALE FED 13-34	WR	5067* GR	1768 FSL 0615 FWL	34	NWSW	090S	180E	UTA	U-68618	OW

END OF EXHIBIT

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		8. WELL NAME and NUMBER: See Attached Exhibit
2. NAME OF OPERATOR: Inland Production Company <i>N5160</i>		9. API NUMBER:
3. ADDRESS OF OPERATOR: 1401 17th St. #1000 CITY <i>Denver</i> STATE <i>Co</i> ZIP <i>80202</i>	PHONE NUMBER: (303) 893-0102	10. FIELD AND POOL OR WILDCAT:
4. LOCATION OF WELL FOOTAGES AT SURFACE:  QTR/CTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		COUNTY:  STATE: <b>UTAH</b>

**11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Effective 4/15/04, Inland Production Company, as Contract Operator, will take over operations of the attached referenced wells. The previous operator was:

Wildrose Resources Corporation *N9660*  
3121 Cherryridge Road  
Englewood, Colorado 80110-6007

Effective 4/15/04, Inland Production Company, as Contract Operator, is responsible under the terms and conditions of the leases for operations conducted on the leased lands or a portion thereof under BLM Bond No. UT0056 issued by Hartford.

Attached is a list of wells included.

Previous Operator Signature:

Title:

NAME (PLEASE PRINT) <i>Marc MacAluso</i>	TITLE <i>CEO, Wildrose Resources Corporation</i>
SIGNATURE <i>[Signature]</i>	DATE <i>4/15/04</i>

(This space for State use only)

**RECEIVED**

**APR 26 2004**

**STATE OF UTAH**  
**DEPARTMENT OF NATURAL RESOURCES**  
**DIVISION OF OIL, GAS AND MINING**

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: See Attached Exhibit
2. NAME OF OPERATOR: Inland Production Company <i>N5160</i>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: -
3. ADDRESS OF OPERATOR: 1401 17th St. #1000 CITY <i>Denver</i> STATE <i>Co</i> ZIP <i>80202</i> PHONE NUMBER: <i>(303) 893-0102</i>		7. UNIT or CA AGREEMENT NAME:
4. LOCATION OF WELL FOOTAGES AT SURFACE: COUNTY:		8. WELL NAME and NUMBER: See Attached Exhibit
QTRQTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: STATE: <i>UTAH</i>		9. API NUMBER:
		10. FIELD AND POOL OR WILDCAT:

**11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS.** Clearly show all pertinent details including dates, depths, volumes, etc.

Effective 4/15/04, Inland Production Company, as Contract Operator, will take over operations of the attached referenced wells. The previous operator was:

Wildrose Resources Corporation  
 3121 Cherryridge Road  
 Englewood, Colorado 80110-6007

Effective 4/15/04, Inland Production Company, as Contract Operator, is responsible under the terms and conditions of the leases for operations conducted on the leased lands or a portion thereof under BLM Bond No. UT0056 Issued by Hartford.

Attached is a list of wells included.

Current Contract Operator Signature:

Title:

NAME (PLEASE PRINT) <i>Bill I. Pennington</i>	TITLE <i>President, Inland Production Company</i>
SIGNATURE <i>Bill I. Pennington</i>	DATE <i>4/15/04</i>

(This space for State use only)

(5/2000)

(See instructions on Reverse Side)

**RECEIVED**  
**APR 26 2004**  
 DIV. OF OIL, GAS & MINING

**EXHIBIT "A"**  
Attached to Sundry Notices

Wildrose Resources Corporation  
and  
Inland Production Company

N	4304731528	REX LAMB 34-1	WR	4932° GR	2118 FNL 2132 FEL	34	SWNE	040S	010E	UTA	FEE	OW
N	4304731892	REX LAMB 34-2	WR	4932° GR	2018 FNL 1088 FEL	34	SENE	040S	010E	UTA	FEE	OW
N	4301331914	HARBOUR TOWN FED 21-33	WR	5129° GR	0813 FNL 1938 FWL	33	NENW	080S	170E	DU	U-71368	OW
N	4301331915	HARBOUR TOWN FED 42-33	WR	5128° GR	1954 FNL 0851 FEL	33	SENE	080S	170E	DU	U-71368	OW
N	4301331916	HARBOUR TOWN FED 23-34	WR	5088° GR	1943 FSL 2162 FWL	34	NESW	080S	170E	DU	U-71368	OW
N	4301331917	HARBOUR TOWN FED 44-34	WR	5083° GL	0835 FSL 0500 FEL	34	SESE	080S	170E	DU	U-71368	OW
N	4304732080	FEDERAL #23-28	WR	4910° KB	2113 FSL 1844 FWL	28	NESW	080S	180E	UTA	U-38442	OW
N	4304732700	FEDERAL 24-26	WR	4913° GR	0880 FSL 1980 FWL	28	SESW	080S	180E	UTA	U-38442	OW
N	4304732720	FEDERAL 13-28	WR	4903° GR	2018 FSL 0832 FWL	28	NWSW	080S	180E	UTA	U-38442	OW
N	4304732731	FEDERAL 12-26	WR	4924° GR	2958 FSL 0470 FWL	28	SWNW	080S	180E	UTA	U-38442	GW
N	4304732847	FEDERAL 34-28	WR	4907° GR	0741 FSL 1957 FEL	26	SWSE	080S	180E	UTA	U-75532	OW
N	4304732732	FEDERAL 43-27	WR	4862° GR	1917 FSL 0559 FEL	27	NESE	080S	180E	UTA	U-38442	OW
N	4304732733	FEDERAL 14-28	WR	4902° GR	0860 FSL 0846 FWL	28	SWSW	080S	180E	UTA	U-51081	OW
N	4304732743	FEDERAL 13-28	WR	4955° GR	2007 FSL 0704 FWL	28	NWSW	080S	180E	UTA	U-38442	OW
N	4304731484	PARIETTE FED 10-29	WR	4890° GR	1843 FSL 2084 FEL	29	NWSE	080S	180E	UTA	U-51081	OW
N	4304731550	W PARIETTE FED 6-29	WR	4892° GR	1978 FNL 2141 FWL	28	SENW	080S	180E	UTA	U-38848	OW
N	4304732079	FEDERAL 44-29	WR	4993° KB	0860 FSL 0860 FEL	29	SESE	080S	180E	UTA	U-51081	OW
N	4304732701	FEDERAL 43-29	WR	4886° GR	1904 FSL 0710 FEL	29	NESE	080S	180E	UTA	U-51081	OW
N	4304732742	FEDERAL 34-29	WR	4917° GR	0712 FSL 1925 FEL	29	SWSE	080S	180E	UTA	U-51081	OW
N	4304732848	PARIETTE FED 32-29	WR	4870° GR	1942 FNL 1786 FEL	29	SWNE	080S	180E	UTA	U-38848	OW
N	4304731118	NGC ST 33-32	WR	4830° GR	1914 FSL 1911 FEL	32	NWSE	080S	180E	UTA	ML-22058	OW
N	4304732077	FEDERAL 12-34	WR	4843° KB	1871 FNL 0375 FWL	34	SWNW	080S	180E	UTA	U-51081	OW
N	4304732702	FEDERAL 42-35	WR	4815° GR	1955 FNL 0463 FEL	35	SENE	080S	180E	UTA	U-51081	OW
N	4304732721	FEDERAL 43-35	WR	4870° GR	2077 FSL 0896 FEL	35	NESE	080S	180E	UTA	U-49430	OW
N	4304731345	GULF STATE 36-13	WR	4831° GR	1850 FSL 0800 FWL	36	NWSW	080S	180E	UTA	ML-22057	OW
N	4304731350	GULF STATE 36-11	WR	4837° GR	0677 FNL 0796 FWL	36	NWNW	080S	180E	UTA	ML-22057	OW
N	4304731884	GULF STATE 36-12	WR	4882° GR	1778 FNL 0782 FWL	36	SWNW	080S	180E	UTA	ML-22057	OW
N	4304731892	GULF STATE 36-22	WR	4923° GR	1860 FNL 1980 FWL	36	SENW	080S	180E	UTA	ML-22057	OW
N	4304732580	UTD STATE 36-K	WR	4809° GR	2120 FSL 1945 FWL	36	NESW	080S	180E	UTA	ML-22057	OW
N	4304732581	UTD STATE 36-M	WR	4744° KB	0848 FSL 0848 FWL	36	SWSW	080S	180E	UTA	ML-22057	OW
N	4304731418	WILDROSE FEDERAL 31-1	WR	4871° GR	2051 FSL 0883 FWL	31	NWSW	080S	190E	UTA	U-30103	OW
N	4301330642	MONUMENT BUTTE 1-3	WR	5166° GR	1945 FSL 0816 FWL	03	NWSW	080S	170E	DU	U-44004	OW
N	4301330810	MONUMENT BUTTE 2-3	WR	5107° GR	1918 FNL 1979 FWL	03	SENW	080S	170E	DU	U-44004	OW
N	4301331780	PINEHURST FEDERAL 3-7	WR	5098° GR	2082 FNL 1999 FEL	03	SWNE	080S	170E	DU	61252	OW
N	4301331761	PINEHURST FEDERAL 3-8	WR	5030° GR	1980 FNL 0660 FEL	03	SENE	080S	170E	DU	61252	OW
N	4301331784	RIVIERA FEDERAL 3-11	WR	5123° GR	2050 FSL 2008 FWL	03	NESW	080S	170E	DU	U-44004	OW
N	4301332183	RIVIERA FED 3-9	WR	5030 GR	1922 FSL 0805 FEL	03	NESE	080S	170E	DU	U-44004	OW
N	4301332184	RIVIERA FED 3-10	WR	5108 GR	2100 FSL 2190 FEL	03	NWSE	080S	170E	DU	U-44004	OW
N	4301331023	FEDERAL 15-1-B	WR	5177° GR	0660 FNL 1983 FEL	15	NWNE	080S	170E	DU	U-44429	OW
N	4304732777	BIRKDALE FED 13-34	WR	5087° GR	1768 FSL 0615 FWL	34	NWSW	080S	180E	UTA	U-68618	OW

END OF EXHIBIT

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APR 26 2004  
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## OPERATOR CHANGE WORKSHEET

## ROUTING

1. GLH

2. CDW

3. FILE

Change of Operator (Well Sold)

Designation of Agent/Operator

**X Operator Name Change**

Merger

The operator of the well(s) listed below has changed, effective:

**4/15/2004**

FROM: (Old Operator):	TO: ( New Operator):
N9660-Wildrose Resources Corporation 3121 Cherryridge Road Englewood, CO 80110-6007 Phone: 1-(303) 761-9965	N5160-Inland Production Company 1401 17th St, Suite 1000 Denver, CO 80202 Phone: 1-(303) 893-0102

CA No.

Unit:

## WELL(S)

NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
HARBOURTOWN FED 21-33	33	080S	170E	4301331914	✓ 12304	Federal	P	OW
HARBOURTOWN FED 42-33	33	080S	170E	4301331915	✓ 12310	Federal	P	OW
HARBOURTOWN FED 23-34	34	080S	170E	4301331916	✓ 12320	Federal	P	OW
HARBOURTOWN FED 44-34	34	080S	170E	4301331917	✓ 12321	Federal	P	OW
FEDERAL #23-26	26	080S	180E	4304732080	✓ 11265	Federal	P	OW
FEDERAL 24-26	26	080S	180E	4304732700	✓ 11808	Federal	P	OW
FEDERAL 13-26	26	080S	180E	4304732720	✓ 11832	Federal	P	OW
FEDERAL 12-26	26	080S	180E	4304732731	✓ 11896	Federal	P	GW
FEDERAL 34-26	26	080S	180E	4304732847	✓ 12123	Federal	P	OW
FEDERAL 43-27	27	080S	180E	4304732732	✓ 11903	Federal	S	OW
FEDERAL 14-28	28	080S	180E	4304732733	✓ 11908	Federal	S	OW
FEDERAL 13-28	28	080S	180E	4304732743	✓ 11915	Federal	TA	OW
PARIETTE FED 10-29	29	080S	180E	4304731464	✓ 1428	Federal	P	OW
W PARIETTE FED 6-29	29	080S	180E	4304731550	✓ 9905	Federal	S	OW
FEDERAL 44-29	29	080S	180E	4304732079	✓ 11267	Federal	S	OW
FEDERAL 43-29	29	080S	180E	4304732701	✓ 11816	Federal	P	OW
FEDERAL 34-29	29	080S	180E	4304732742	✓ 11918	Federal	P	OW
PARIETTE FED 32-29	29	080S	180E	4304732848	✓ 12144	Federal	P	OW
FEDERAL 12-34	34	080S	180E	4304732077	✓ 11276	Federal	S	OW
FEDERAL 42-35	35	080S	180E	4304732702	✓ 11811	Federal	S	OW

## OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 4/26/2004
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on 4/26/2004
3. The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 12/10/2003
4. Is the new operator registered in the State of Utah: YES Business Number: 755627-0143
5. If **NO**, the operator was contacted contacted on: \_\_\_\_\_

6. (R649-9-2)Waste Management Plan has been received on: IN PLACE

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: applied for

8. **Federal and Indian Units:**

The BLM or BIA has approved the successor of unit operator for wells listed on: n/a

9. **Federal and Indian Communization Agreements ("CA"):**

The BLM or BIA has approved the operator for all wells listed within a CA on: n/a

10. **Underground Injection Control ("UIC"** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: N/A

**DATA ENTRY:**

- Changes entered in the Oil and Gas Database on: 4/28/2004
- Changes have been entered on the Monthly Operator Change Spread Sheet on: 4/28/2004
- Bond information entered in RBDMS on: 4/28/2004
- Fee wells attached to bond in RBDMS on: 4/28/2004
- Injection Projects to new operator in RBDMS on: n/a
- Receipt of Acceptance of Drilling Procedures for APD/New on: 4/28/2004

**STATE WELL(S) BOND VERIFICATION:**

- State well(s) covered by Bond Number: 4021509 Wildrose

**FEDERAL WELL(S) BOND VERIFICATION:**

- Federal well(s) covered by Bond Number: UT0056

**INDIAN WELL(S) BOND VERIFICATION:**

- Indian well(s) covered by Bond Number: n/a

**FEE WELL(S) BOND VERIFICATION:**

- (R649-3-1) The NEW operator of any fee well(s) listed covered by Bond Number RN4471290
- The FORMER operator has requested a release of liability from their bond on: N/A  
The Division sent response by letter on: N/A

**LEASE INTEREST OWNER NOTIFICATION:**

- (R649-2-10) The FORMER operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: 4/28/2004

**COMMENTS:**



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Vernal Field Office

170 South 500 East

Vernal, UT 84078

(435) 781-4400 Fax: (435) 781-4410  
<http://www.blm.gov/utah/vernal>



IN REPLY REFER TO:

3162.3

UT08300

May 21, 2004

Bill I. Pennington  
Inland Production Company  
1401 17<sup>th</sup> Street, Suite 1000  
Denver, Colorado 80202

Re: Wells: Harbourtown Fed. 23-34,  
Harbourtown Fed. 44-34  
S1/2, Sec. 34, T8S, R17E  
Duchesne County, Utah  
Lease No. U-76955

Dear Mr. Pennington:

This correspondence is in regard to the self-certification statement submitted requesting a change in operator for the referenced wells. After a review by this office, the change in operator request is approved. Effective immediately, Inland Production Company is responsible for all operations performed on the referenced wells. All liability will now fall under your bond, BLM Bond No. UT0056, for all operations conducted on the referenced wells on the leased land.

Our records show that a right-of-way, UTU-74563, has been issued for the off lease portion of the road to the subject wells. In order for Inland Production Company to obtain the Bureau of Land Management's approval for the use of this right-of-way, you must have this right-of-way assigned over to Inland Production Company. Please contact Cindy McKee at 435-781-4434 for instructions on how to complete the assignment of the right-of-way.

If you have any other questions concerning this matter, please contact Leslie Walker of this office at (435) 781-4497.

Sincerely,

Kirk Fleetwood  
Petroleum Engineer

cc: UDOGM  
Wildrose Resources Corp.

RECEIVED  
MAY 27 2004  
DIV. OF OIL, GAS & MINING



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155  
<http://www.blm.gov>



IN REPLY REFER TO:  
3106  
(UT-924)

September 16, 2004

### Memorandum

To: Vernal Field Office

From: Acting Chief, Branch of Fluid Minerals

Subject: Merger Approval

Attached is an approved copy of the name change recognized by the Utah State Office. We have updated our records to reflect the merger from Inland Production Company into Newfield Production Company on September 2, 2004.

Michael Coulthard  
Acting Chief, Branch of  
Fluid Minerals

### Enclosure

1. State of Texas Certificate of Registration

cc: MMS, Reference Data Branch, James Sykes, PO Box 25165, Denver CO 80225  
State of Utah, DOGM, Attn: Earlene Russell, PO Box 145801, SLC UT 84114  
Teresa Thompson  
Joe Incardine  
Connie Seare

UTSL-	15855	61052	73088	76561	
071572A	16535	62848	73089	76787	
065914	16539	63073B	73520A	76808	
	16544	63073D	74108	76813	
	17036	63073E	74805	76954	63073X
	17424	63073O	74806	76956	63098A
	18048	64917	74807	77233	68528A
UTU-	18399	64379	74808	77234	72086A
	19267	64380	74389	77235	72613A
02458	26026A	64381	74390	77337	73520X
03563	30096	64805	74391	77338	74477X
03563A	30103	64806	74392	77339	75023X
04493	31260	64917	74393	77357	76189X
05843	33992	65207	74398	77359	76331X
07978	34173	65210	74399	77365	76788X
09803	34346	65635	74400	77369	77098X
017439B	36442	65967	74404	77370	77107X
017985	36846	65969	74405	77546	77236X
017991	38411	65970	74406	77553	77376X
017992	38428	66184	74411	77554	78560X
018073	38429	66185	74805	78022	79485X
019222	38431	66191	74806	79013	79641X
020252	39713	67168	74826	79014	80207X
020252A	39714	67170	74827	79015	81307X
020254	40026	67208	74835	79016	
020255	40652	67549	74868	79017	
020309D	40894	67586	74869	79831	
022684A	41377	67845	74870	79832	
027345	44210	68105	74872	79833	
034217A	44426	68548	74970	79831	
035521	44430	68618	75036	79834	
035521A	45431	69060	75037	80450	
038797	47171	69061	75038	80915	
058149	49092	69744	75039	81000	
063597A	49430	70821	75075		
075174	49950	72103	75078		
096547	50376	72104	75089		
096550	50385	72105	75090		
	50376	72106	75234		
	50750	72107	75238		
10760	51081	72108	76239		
11385	52013	73086	76240		
13905	52018	73087	76241		
15392	58546	73807	76560		



## Office of the Secretary of State

The undersigned, as Secretary of State of Texas, does hereby certify that the attached is a true and correct copy of each document on file in this office as described below:

Newfield Production Company  
Filing Number: 41530400

Articles of Amendment

September 02, 2004

In testimony whereof, I have hereunto signed my name officially and caused to be impressed hereon the Seal of State at my office in Austin, Texas on September 10, 2004.



A handwritten signature in black ink, appearing to read "G. Connor".

Secretary of State

ARTICLES OF AMENDMENT  
TO THE  
ARTICLES OF INCORPORATION  
OF  
INLAND PRODUCTION COMPANY

FILED  
In the Office of the  
Secretary of State of Texas  
SEP 02 2004  
Corporations Section

Pursuant to the provisions of Article 4.04 of the Texas Business Corporation Act (the "TBCA"), the undersigned corporation adopts the following articles of amendment to the articles of incorporation:

ARTICLE 1 – Name

The name of the corporation is Inland Production Company.

ARTICLE 2 – Amended Name

The following amendment to the Articles of Incorporation was approved by the Board of Directors and adopted by the shareholders of the corporation on August 27, 2004.

The amendment alters or changes Article One of the Articles of Incorporation to change the name of the corporation so that, as amended, Article One shall read in its entirety as follows:

"ARTICLE ONE – The name of the corporation is Newfield Production Company."

ARTICLE 3 – Effective Date of Filing

This document will become effective upon filing.

The holder of all of the shares outstanding and entitled to vote on said amendment has signed a consent in writing pursuant to Article 9.10 of the TBCA, adopting said amendment, and any written notice required has been given.

IN WITNESS WHEREOF, the undersigned corporation has executed these Articles of Amendment as of the 1<sup>st</sup> day of September, 2004.

INLAND RESOURCES INC.

By: Susan G. Riggs  
Susan G. Riggs, Treasurer

JAN 2 / 2005

INLAND

DIV. OF OIL, GAS &amp; MINING

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING  
ENTITY ACTION FORM - FORM 6

OPERATOR: NEWFIELD PRODUCTION COMPANY  
ADDRESS: RT. 3 BOX 3630  
MYTON, UT 84052

OPERATOR ACCT. NO. N2686-  
N5160

ACTION	CURRENT	NEW	API NUMBER	WELL NAME	WELL LOCATION					SPUD	EFFECTIVE
					QQ	SC	TP	RG	COUNTY		
C	12304	12391	43-013-31914	Harbourtown Fed 21-33	NE/NW	33	8S	17E	Duchesne		12/1/2004
WELL 1 COMMENTS: <u>GRPV</u> <u>1/31/05</u>											
C	12310	12391	43-013-31915	Harbourtown Fed 42-33	SE/NE	33	8S	17E	Duchesne		12/1/2004
WELL 2 COMMENTS: <u>GRPV</u> <u>1/31/05</u>											
C	12320	12391	43-013-31916	Harbourtown Fed 23-34	NE/SW	34	8S	17E	Duchesne		12/1/2004
WELL 3 COMMENTS: <u>GRPV</u> <u>1/31/05</u>											
C	12321	12391	43-013-31917	Harbourtown Fed 44-34	SE/SE	34	8S	17E	Duchesne		12/1/2004
WELL 4 COMMENTS: <u>GRPV</u> <u>1/31/05</u>											
C	13596	12391	43-013-32183	Greater Boundary 9-3-9-17	NE/SE	3	9S	17E	Duchesne		12/1/2004
WELL 5 COMMENTS: <u>GRPV</u> <u>1/31/05</u>											

ACTION CODES (See instructions on back of form)

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or well well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected

(3/8)

Kebbie S. Jones  
Signature

Kebbie S. Jones

Production Clerk  
Title

January 27, 2005  
Date

PAGE 03

INLAND

4356463031

01/27/2005 14:19



6a. (R649-9-2)Waste Management Plan has been received on: IN PLACE  
6b. Inspections of LA PA state/fee well sites complete on: waived

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM BIA

8. **Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: n/a

9. **Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: na/

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 2/23/2005

#### DATA ENTRY:

1. Changes entered in the Oil and Gas Database on: 2/28/2005  
2. Changes have been entered on the Monthly Operator Change Spread Sheet on: 2/28/2005  
3. Bond information entered in RBDMS on: 2/28/2005  
4. Fee/State wells attached to bond in RBDMS on: 2/28/2005  
5. Injection Projects to new operator in RBDMS on: 2/28/2005  
6. Receipt of Acceptance of Drilling Procedures for APD/New on: waived

#### FEDERAL WELL(S) BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: UT 0056

#### INDIAN WELL(S) BOND VERIFICATION:

1. Indian well(s) covered by Bond Number: 61BSBDH2912

#### FEE & STATE WELL(S) BOND VERIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 61BSBDH2919  
2. The **FORMER** operator has requested a release of liability from their bond on: n/a\*  
The Division sent response by letter on: n/a

#### LEASE INTEREST OWNER NOTIFICATION:

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

#### COMMENTS:

\*Bond rider changed operator name from Inland Production Company to Newfield Production Company - received 2/23/05



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8  
999 18th STREET - SUITE 300  
DENVER, CO 80202-2466  
<http://www.epa.gov/region08>

AUG 21 2006

Ref: 8P-W-GW

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

David Gerbig  
Newfield Production Company  
1401 Seventeenth Street  
Suite 1000  
Denver, CO 80202

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
**FOR RECORD ONLY**

RECEIVED

AUG 24 2006

DIV. OF OIL, GAS & MINING

43-013-31916  
85 17E 34

Re: FINAL EPA UIC Permit  
EPA Permit No. UT21046-07093  
Harbourtown Federal 23-34-8-17 Well  
Duchesne County, Utah

Dear Mr. Gerbig:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Permit for the proposed Harbourtown Federal 23-34-8-17 injection well. A Statement of Basis, which discusses development of the conditions and requirements of the Permit, also is included.

The Public Comment period ended on JUL 27 2006. There were no comments on the Draft Permit received during the Public Notice period, and therefore the Final Permit becomes effective on the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect on the date that this Permit becomes effective.

Please note that under the terms of the Final Permit, you are authorized only to construct the proposed injection well, and must fulfill the "Prior to Commencing Injection" requirements of the Permit, Part II Section C Subpart 1 and obtain written Authorization to Inject prior to commencing injection. It is your responsibility to be familiar with and to comply with all provisions of the Final Permit.

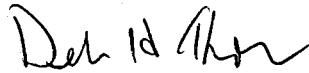
The Permit and the authorization to inject are issued for the operating life of the well unless terminated (Part III, Section B). The EPA will review this Permit at least every five (5) years to determine whether action under 40 CFR § 144.36(a) is warranted.



Printed on Recycled Paper

If you have any questions on the enclosed Final Permit or Statement of Basis, please call Dan Jackson of my staff at (303) 312-6155, or toll-free at (800) 227-8917, ext. 6155.

Sincerely,



*for* Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

enclosure:     Final UIC Permit  
                     Statement of Basis  
                     Aquifer Exemption

cc:                cc: without enclosures:

                     Maxine Natchees, Acting Chairperson  
                     Uintah & Ouray Business Committee  
                     Ute Indian Tribe  
                     P.O. Box 190  
                     Fort Duchesne, UT 84026

                     Lynn Becker, Director  
                     Energy and Minerals Department  
                     Ute Indian Tribe  
                     P.O. Box 70  
                     Ft. Duchesne, UT 84026

                     BIA - Uintah & Ouray Indian Agency  
                     P.O. Box 130  
                     Fort Duchesne, UT 84026

cc: with enclosures:

Mike Guinn  
Vice President, Operations  
Newfield Production Company  
10530 South Country Road #33  
Myton, Utah 84052

S. Elaine Willie  
Environmental Coordinator  
Ute Indian Tribe  
P.O. Box 460  
Fort Duchesne, UT 84026

Gil Hunt  
Associate Director  
Utah Division of Oil, Gas, and Mining  
1594 West North Temple - Suite 1220  
Salt Lake City, UT 84114-5801

Fluid Minerals Engineering Department  
BLM - Vernal District  
170 South 500 East  
Vernal, UT 84078



**UNDERGROUND INJECTION CONTROL PROGRAM  
PERMIT**

**PREPARED: July 2006**

**Permit No. UT21046-07093**

**Class II Enhanced Oil Recovery Injection Well**

**Harbourtown Federal 23-34-8-17  
DUCHESNE County, UT**

**Issued To**

**Newfield Production Company**

**1401 Seventeenth Street**

**Suite 1000**

**Denver, CO 80202**

## Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE

Under the authority of the Safe Drinking Water Act and Underground Injection Control (UIC) Program regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 2, 124, 144, 146, and 147, and according to the terms of this Permit,

Newfield Production Company  
1401 Seventeenth Street  
Suite 1000  
Denver, CO 80202

is authorized to construct and to operate the following Class II injection well or wells:

Harbourtown Federal 23-34-8-17  
1943 ft FSL 2162 ft FWL, NESW S34, T8S, R17E  
DUCHESNE County, UT

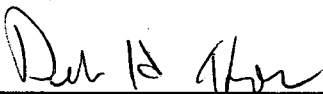
Permit requirements herein are based on regulations found in 40 CFR Parts 124, 144, 146, and 147 which are in effect on the Effective Date of this Permit. Issuance of this Permit does not convey any property rights of any sort, nor does it authorize any injury to persons or property or invasion of other private rights, or any infringement of other federal, State or local law or regulation.

This Permit is based on representations made by the applicant and on other information contained in the Administrative Record. Misrepresentation of information or failure to fully disclose all relevant information may be cause for termination, revocation and reissuance, or modification of this Permit and/or formal enforcement action. This Permit will be reviewed periodically to determine whether action under 40 CFR 144.36(a) is required.

This Permit is issued for the life of the well or wells unless modified, revoked and reissued, or terminated under 40 CFR 144.39 or 144.40. This Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for this program is delegated to an Indian Tribe or a State. Upon the effective date of delegation, all reports, notifications, questions and other compliance actions shall be directed to the Indian tribe or State Program Director or designee.

Issue Date: AUG 21 2006

Effective Date AUG 21 2006

  
\_\_\_\_\_  
for Stephen S. Tuber

Assistant Regional Administrator\*  
Office of Partnerships and Regulatory Assistance

\*NOTE: The person holding this title is referred to as the "Director" throughout this Permit.

## **PART II. SPECIFIC PERMIT CONDITIONS**

### **Section A. WELL CONSTRUCTION REQUIREMENTS**

These requirements represent the approved minimum construction standards for well casing and cement, injection tubing, and packer.

Details of the approved well construction plan are incorporated into this Permit as APPENDIX A. Changes to the approved plan that may occur during construction must be approved by the Director prior to being physically incorporated.

#### **1. Casing and Cement.**

The well or wells shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The well casing and cement shall be designed for the life expectancy of the well and of the grade and size shown in APPENDIX A. Remedial cementing may be required if shown to be inadequate by cement bond log or other attempted demonstration of Part II (External) mechanical integrity.

#### **2. Injection Tubing and Packer.**

Injection tubing is required, and shall be run and set with a packer at or below the depth indicated in APPENDIX A. The packer setting depth may be changed provided it remains below the depth indicated in APPENDIX A and the Permittee provides notice and obtains the Director's approval for the change.

#### **3. Sampling and Monitoring Devices.**

The Permittee shall install and maintain in good operating condition:

- (a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and
- (b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:
  - (i) on the injection tubing; and
  - (ii) on the tubing-casing annulus (TCA); and
- (c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure specified in APPENDIX C is reached at the wellhead; and
- (d) a non-resettable cumulative volume recorder attached to the injection line.

#### **4. Well Logging and Testing**

Well logging and testing requirements are found in APPENDIX B. The Permittee shall ensure the log and test requirements are performed within the time frames specified in APPENDIX B. Well logs and tests shall be performed according to current EPA-approved procedures. Well log and test results shall be submitted to the Director within sixty (60) days of completion of the logging or testing activity, and shall include a report describing the methods used during logging or testing and an interpretation of the test or log results.

#### **5. Postponement of Construction or Conversion**

The Permittee shall complete well construction within one year of the Effective Date of the Permit, or in the case of an Area Permit within one year of authorization of the additional well. Authorization to construct and operate shall expire if the well has not been constructed within one year of the Effective Date of the Permit or authorization and the Permit may be terminated under 40 CFR 144.40, unless the Permittee has notified the Director and requested an extension prior to expiration. Notification shall be in writing, and shall state the reasons for the delay and provide an estimated completion date. Once Authorization has expired under this part, the complete permit process including opportunity for public comment may be required before Authorization to construct and operate may be reissued.

#### **6. Workovers and Alterations**

Workovers and alterations shall meet all conditions of the Permit. Prior to beginning any addition or physical alteration to an injection well that may significantly affect the tubing, packer or casing, the Permittee shall give advance notice to the Director and obtain the Director's approval. The Permittee shall record all changes to well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workover, logging, or test data to EPA within sixty (60) days of completion of the activity.

A successful demonstration of Part I MI is required following the completion of any well workover or alteration which affects the casing, tubing, or packer. Injection operations shall not be resumed until the well has successfully demonstrated mechanical integrity and the Director has provided written approval to resume injection.

### **Section B. MECHANICAL INTEGRITY**

The Permittee is required to ensure each injection well maintains mechanical integrity at all times. The Director, by written notice, may require the Permittee to comply with a schedule describing when mechanical integrity demonstrations shall be made.

An injection well has mechanical integrity if:

- (a) There is no significant leak in the casing, tubing, or packer (Part I); and
- (b) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore (Part II).

### **1. *Demonstration of Mechanical Integrity (MI).***

The operator shall demonstrate MI prior to commencing injection and periodically thereafter. Well-specific conditions dictate the methods and the frequency for demonstrating MI and are discussed in the Statement of Basis. The logs and tests are designed to demonstrate both internal (Part I) and external (Part II) MI as described above. The conditions present at this well site warrant the methods and frequency required in Appendix B of this Permit.

In addition to these regularly scheduled demonstrations of MI, the operator shall demonstrate internal (Part I) MI after any workover which affects the tubing, packer or casing.

The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluid into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director as soon as possible but no later than sixty (60) days after the test is complete.

### **2. *Mechanical Integrity Test Methods and Criteria***

EPA-approved methods shall be used to demonstrate mechanical integrity. Ground Water Section Guidance No. 34 "Cement Bond Logging Techniques and Interpretation", Ground Water Section Guidance No. 37, "Demonstrating Part II (External) Mechanical Integrity for a Class II injection well permit", and Ground Water Section Guidance No. 39, "Pressure Testing Injection Wells for Part I (Internal) Mechanical Integrity" are available from EPA and will be provided upon request.

The Director may stipulate specific test methods and criteria best suited for a specific well construction and injection operation.

### **3. *Notification Prior to Testing.***

The Permittee shall notify the Director at least 30 days prior to any scheduled mechanical integrity test. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

### **4. *Loss of Mechanical Integrity.***

If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity becomes evident during operation (such as presence of pressure in the TCA, water flowing at the surface, etc.), the Permittee shall notify the Director within 24 hours (see Part III Section E Paragraph 11(e) of this Permit) and the well shall be shut-in within 48 hours unless the Director requires immediate shut-in.

Within five days, the Permittee shall submit a follow-up written report that documents test results, repairs undertaken or a proposed remedial action plan.

Injection operations shall not be resumed until after the well has successfully been repaired and demonstrated mechanical integrity, and the Director has provided approval to resume injection.

## **Section C. WELL OPERATION**

**INJECTION BETWEEN THE OUTERMOST CASING PROTECTING UNDERGROUND SOURCES OF DRINKING WATER AND THE WELL BORE IS PROHIBITED.**

Injection is approved under the following conditions:

### **1. Requirements Prior to Commencing Injection.**

Well injection, including for new wells authorized by an Area Permit under 40 CFR 144.33 (c), may commence only after all well construction and pre-injection requirements herein have been met and approved. The Permittee may not commence injection until construction is complete, and

- (a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-10 or 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and
  - (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or
  - (ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

### **2. Injection Interval.**

Injection is permitted only within the approved injection interval, listed in APPENDIX C. Additional individual injection perforations may be added provided that they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6.

### **3. Injection Pressure Limitation**

- (a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injection or formation fluids into a USDW.
- (b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permittee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.

#### **4. Injection Volume Limitation.**

Injection volume is limited to the total volume specified in APPENDIX C.

#### **5. Injection Fluid Limitation.**

Injected fluids are limited to those identified in 40 CFR 144.6(b)(2) as fluids used for enhanced recovery of oil or natural gas, including those which are brought to the surface in connection with conventional oil or natural gas production that may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved for injection. This well is NOT approved for commercial brine injection, industrial waste fluid disposal or injection of hazardous waste as defined by CFR 40 Part 261. The Permittee shall provide a listing of the sources of injected fluids in accordance with the reporting requirements in Part II Section D Paragraph 4 and APPENDIX D of this Permit.

#### **6. Tubing-Casing Annulus (TCA)**

The tubing-casing annulus (TCA) shall be filled with water treated with a corrosion inhibitor, or other fluid approved by the Director. The TCA valve shall remain closed during normal operating conditions and the TCA pressure shall be maintained at zero (0) psi.

If TCA pressure cannot be maintained at zero (0) psi, the Permittee shall follow the procedures in Ground Water Section Guidance No. 35 "Procedures to follow when excessive annular pressure is observed on a well."

### **Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS**

#### **1. Monitoring Parameters, Frequency, Records and Reports.**

Monitoring parameters are specified in APPENDIX D. Pressure monitoring recordings shall be taken at the wellhead. The listed parameters are to be monitored, recorded and reported at the frequency indicated in APPENDIX D even during periods when the well is not operating.

Monitoring records must include:

- (a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;
- (b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;
- (c) the analytical techniques or methods used for analysis.

#### **2. Monitoring Methods.**

- (a) Monitoring observations, measurements, samples, etc. taken for the purpose of complying with these requirements shall be representative of the activity or condition being monitored.

- (b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.
- (c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.
- (d) Pressures are to be measured in pounds per square inch (psi).
- (e) Fluid volumes are to be measured in standard oil field barrels (bbl).
- (f) Fluid rates are to be measured in barrels per day (bbl/day).

### **3. Records Retention.**

- (a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.
- (b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.
- (c) The Permittee shall retain records at the location designated in APPENDIX D.

### **4. Annual Reports.**

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequent Annual Reports shall cover the period from January 1 through December 31 of the reporting year. Annual Reports shall be submitted by February 15 of the year following data collection. EPA Form 7520-11 may be copied and shall be used to submit the Annual Report, however, the monitoring requirements specified in this Permit are mandatory even if EPA Form 7520-11 indicates otherwise.

## **Section E. PLUGGING AND ABANDONMENT**

### **1. Notification of Well Abandonment, Conversion or Closure.**

The Permittee shall notify the Director in writing at least forty-five (45) days prior to: 1) plugging and abandoning an injection well, 2) converting to a non-injection well, and 3) in the case of an Area Permit, before closure of the project.

### **2. Well Plugging Requirements**

Prior to abandonment, the injection well shall be plugged with cement in a manner which prevents the movement of fluids into or between underground sources of drinking water. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director. The well shall be plugged in accordance with the approved plugging and abandonment plan and with 40 CFR 146.10.

### **3. Approved Plugging and Abandonment Plan.**

The approved plugging and abandonment plan is incorporated into this Permit as APPENDIX E. Changes to the approved plugging and abandonment plan must be approved by the Director prior to beginning plugging operations. The Director also may require revision of the approved plugging and abandonment plan at any time prior to plugging the well.

### **4. Forty Five (45) Day Notice of Plugging and Abandonment.**

The Permittee shall notify the Director at least forty-five (45) days prior to plugging and abandoning a well and provide notice of any anticipated change to the approved plugging and abandonment plan.

### **5. Plugging and Abandonment Report.**

Within sixty (60) days after plugging a well, the Permittee shall submit a report (EPA Form 7520-13) to the Director. The plugging report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

- (a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or
- (b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.

### **6. Inactive Wells.**

After any period of two years during which there is no injection the Permittee shall plug and abandon the well in accordance with Part II Section E Paragraph 2 of this Permit unless the Permittee:

- (a) Provides written notice to the Director;
- (b) Describes the actions or procedures the Permittee will take to ensure that the well will not endanger USDWs during the period of inactivity. These actions and procedures shall include compliance with mechanical integrity demonstration, Financial Responsibility and all other permit requirements designed to protect USDWs; and

- (c) Receives written notice by the Director temporarily waiving plugging and abandonment requirements.

## **PART III. CONDITIONS APPLICABLE TO ALL PERMITS**

### **Section A. EFFECT OF PERMIT**

The Permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The Permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR 142 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized by this Permit or by rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment, for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations. Nothing in this Permit relieves the Permittee of any duties under applicable regulations.

### **Section B. CHANGES TO PERMIT CONDITIONS**

#### ***1. Modification, Reissuance, or Termination.***

The Director may, for cause or upon a request from the Permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR 124.5, 144.12, 144.39, and 144.40. Also, this Permit is subject to minor modification for causes as specified in 40 CFR 144.41. The filing of a request for modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit.

#### ***2. Conversions.***

The Director may, for cause or upon a written request from the Permittee, allow conversion of the well from a Class II injection well to a non-Class II well. Conversion may not proceed until the Permittee receives written approval from the Director. Conditions of such conversion may include but are not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, well-specific monitoring and reporting following the conversion, and demonstration of practical use of the converted configuration.

#### ***3. Transfer of Permit.***

Under 40 CFR 144.38, this Permit is transferable provided the current Permittee notifies the Director at least thirty (30) days in advance of the proposed transfer date (EPA Form 7520-7) and provides a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage and liability between them. The notice shall adequately demonstrate that the financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new Permittee. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory.

#### **4. Permittee Change of Address.**

Upon the Permittee's change of address, or whenever the operator changes the address where monitoring records are kept, the Permittee must provide written notice to the Director within 30 days.

#### **5. Construction Changes, Workovers, Logging and Testing Data**

The Permittee shall give advance notice to the Director, and shall obtain the Director's written approval prior to any physical alterations or additions to the permitted facility. Alterations or workovers shall meet all conditions as set forth in this permit. The Permittee shall record any changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workovers, logging, or test data to EPA within sixty (60) days of completion of the activity.

Following the completion of any well workovers or alterations which affect the casing, tubing, or packer, a successful demonstration of mechanical integrity (Part III, Section F of this permit) shall be made, and written authorization from the Director received, prior to resuming injection activities.

### **Section C. SEVERABILITY**

The Provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

### **Section D. CONFIDENTIALITY**

In accordance with 40 CFR Part 2 and 40 CFR 144.5, information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the Permittee, and
- information which deals with the existence, absence or level of contaminants in drinking water.

### **Section E. GENERAL PERMIT REQUIREMENTS**

#### **1. Duty to Comply.**

The Permittee must comply with all conditions of this Permit. Any noncompliance constitutes a violation of the Safe Drinking Water Act (SDWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the Permittee need not comply with the provisions of this Permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34. All violations of the SDWA may subject the Permittee to penalties and/or criminal prosecution as specified in Section 1423 of the SDWA.

## **2. Duty to Reapply.**

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, under 40 CFR 144.37 the Permittee must apply for a new permit prior to the expiration date.

## **3. Need to Halt or Reduce Activity Not a Defense.**

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

## **4. Duty to Mitigate.**

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.

## **5. Proper Operation and Maintenance.**

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

## **6. Permit Actions.**

This Permit may be modified, revoked and reissued or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

## **7. Property Rights.**

This Permit does not convey any property rights of any sort, or any exclusive privilege.

## **8. Duty to Provide Information.**

The Permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. The Permittee is required to submit any information required by this Permit or by the Director to the mailing address designated in writing by the Director.

## **9. Inspection and Entry.**

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

#### **10. Signatory Requirements.**

All applications, reports or other information submitted to the Director shall be signed and certified according to 40 CFR 144.32. This section explains the requirements for persons duly authorized to sign documents, and provides wording for required certification.

#### **11. Reporting Requirements.**

- (a) **Planned changes.** The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.
- (b) **Anticipated noncompliance.** The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) **Monitoring Reports.** Monitoring results shall be reported at the intervals specified in this Permit.
- (d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.
- (e) **Twenty-four hour reporting.** The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:
  - (i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or
  - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Information shall be provided, either directly or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning (800) 227-8917 and requesting EPA Region VIII UIC Program Compliance and Technical Enforcement Director, or by contacting the EPA Region VIII Emergency Operations Center at (303) 293-1788.

In addition, a follow up written report shall be provided to the Director within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- (f) Oil Spill and Chemical Release Reporting: The Permittee shall comply with all reporting requirements related to the occurrence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website <http://www.nrc.uscg.mil/index.htm>.
- (g) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.
- (h) Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

## **Section F. FINANCIAL RESPONSIBILITY**

### ***1. Method of Providing Financial Responsibility.***

The Permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). No substitution of a demonstration of financial responsibility shall become effective until the Permittee receives written notification from the Director that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect changes in such costs and may require the Permittee to provide a revised demonstration of financial responsibility.

### ***2. Insolvency.***

In the event of:

- (a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or
- (b) suspension or revocation of the authority of the trustee institution to act as trustee; or

- (c) the institution issuing the financial mechanism losing its authority to issue such an instrument

the Permittee must notify the Director in writing, within ten (10) business days, and the Permittee must establish other financial assurance or liability coverage acceptable to the Director within sixty (60) days after any event specified in (a), (b), or (c) above.

The Permittee must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor, if named as debtor of a corporate guarantee, must make such a notification as required under the terms of the guarantee.

## **APPENDIX A**

### **WELL CONSTRUCTION REQUIREMENTS**

#### **Casing and Cementing**

The well was drilled in March 1998 to a total depth of 5,900 ft, and began oil production from the Green River Formation in 2003. Surface casing was set at 298 ft below ground surface (BGS) and cemented to surface using 150 sx cement. Long string casing was set at 5,880 ft and cemented with 470 sx cement to approximately 1,140 ft BGS by CBL, [1,279 ft BGS calculated].

#### **Tubing and Packer**

For injection service a packer and tubing assembly are required. The tubing shall be of 2-7/8 inch or similar size, and the packer shall be set no more than 100 ft above the top perforation.

Spinal Time: 1:15:45  
Fuel on: 1:12:23  
Fuel: 10:23 43.5298

SURFACE CASING

PAGE SIZE 3.4K  
 ORIGIN  
 WEIGHT 1.4  
 LENGTH  
 UNIT LENGTH 708  
 BYTE SIZE 12.4K  
 CURRENT DATA ADDRESS 11

### RECOLLECTION CASE

LENGTH: 5.75'  
 GRADE  
 WIDTH: 5.50'  
 LENGTH: 13.50'  
 DEPTH: 1.00' (1.00)  
 MAX. SIZE: 1.00'  
 CEMENT: 1.00' (1.00)  
 CEMENT: 1.00' (1.00)

**746 NS**

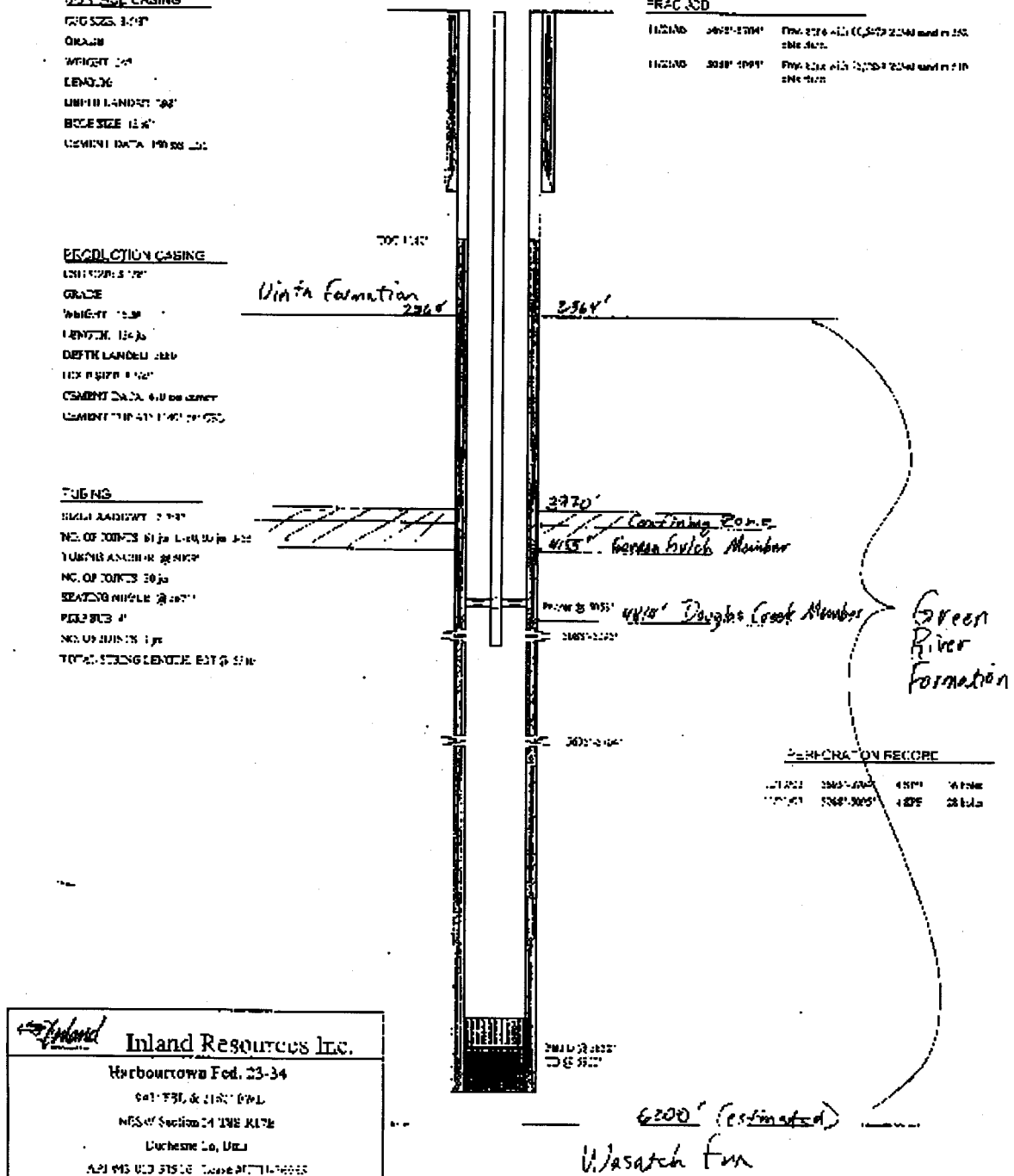
HULL AIRCRAFT 7-73  
 NO. OF POINTS 51 to 1-40 to 1-22  
 TURNING ANCHOR 2-10-73  
 NO. OF POINTS 50 to  
 SEATING SINGLE 2-10-73  
 FUEL 2-10-73  
 NO. OF POINTS 1-73  
 TURNING ANCHOR 2-10-73

[illegible]

**இந்தப் புத்தகத்தை எழுதின,**  
**அவர் பெயர், உருவம்**

FRAC, 3CD

112110	0478 1974	Phy. 276 a11 (547) 2240 and r 250 216 dec.
112110	3038 1999	Phy. 276 a11 (547) 2240 and r 210 216 dec.



M2 11:24

Harbourtown Fed 23-34-8-17 constr.bmp

## APPENDIX B

### LOGGING AND TESTING REQUIREMENTS

#### Logs.

Logs will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well logging required as a condition of this permit.

### NO LOGGING REQUIREMENTS

#### Tests.

Tests will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well test required as a condition of this permit.

<b>WELL NAME:</b> Harbortown Federal 23-34-8-17	
<b>TYPE OF TEST</b>	<b>DATE DUE</b>
Standard Annulus Pressure	prior to injection and at least once every five years thereafter
Pore Pressure	prior to injection

## APPENDIX C

### OPERATING REQUIREMENTS

#### MAXIMUM ALLOWABLE INJECTION PRESSURE:

Maximum Allowable Injection Pressure (MAIP) as measured at the surface shall not exceed the pressure(s) listed below.

WELL NAME	MAXIMUM ALLOWED INJECTION PRESSURE (psi)
	ZONE 1 (Upper)
Harbourtown Federal 23-34-8-17	1,595

#### INJECTION INTERVAL(S):

Injection is permitted only within the approved injection interval listed below. Injection perforations may be altered provided they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6. Specific injection perforations can be found in Appendix A.

WELL NAME: Harbourtown Federal 23-34-8-17			
FORMATION NAME	APPROVED INJECTION INTERVAL (GL, ft)		FRACTURE GRADIENT (psi/ft)
	TOP	BOTTOM	
Garden Gulch Member, Green River Fm	4,155.00	4,814.00	0.750
Douglas Creek Member, Green River Fm	4,814.00	6,200.00	0.750

#### ANNULUS PRESSURE:

The annulus pressure shall be maintained at zero (0) psi as measured at the wellhead. If this pressure cannot be maintained, the Permittee shall follow the procedures listed under Part II, Section C. 6. of this permit.

#### MAXIMUM INJECTION VOLUME:

WELL NAME: Harbourtown Federal 23-34-8-17	
FORMATION NAME	MAXIMUM VOLUME LIMIT (bbls)
Douglas Creek Member, Green River Fm	108,094,200.00

## APPENDIX D

### MONITORING AND REPORTING PARAMETERS

This is a listing of the parameters required to be observed, recorded, and reported. Refer to the permit Part II, Section D, for detailed requirements for observing, recording, and reporting these parameters.

OBSERVE MONTHLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS	
OBSERVE AND RECORD	Injection pressure (psig)
	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbls)

ANNUALLY	
ANALYZE	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH

ANNUALLY	
REPORT	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and averaged annulus pressure(s) (psig)
	Each month's averaged injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

Records of all monitoring activities must be retained and made available for inspection at the following location:

**Newfield Production Company**  
**Route 3 – Box 3630**  
**Myton, UT 84052**

## **APPENDIX E**

### **PLUGGING AND ABANDONMENT REQUIREMENTS**

The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with other applicable federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520 13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The permittee is required to also comply with other applicable federal, state and local plugging regulations. At a minimum, the following plugs are required:

**PLUG 1:** Remove tubing from the well, perform necessary clean out, and displace fluid in well with 9.6 lb. plugging gel. Set a cast iron bridge plug (CIBP) no more than 100 ft above the top perforation at 5,088, ft with a minimum 20 ft cement plug on top of the CIBP.

**PLUG 2:** Set a minimum 100 ft balanced cement plug across the base of the Uintah Formation at 2,382 ft.

**PLUG 3:** Set a minimum 200 ft balanced cement plug from approximately 2,000 to 2,200 ft.

**PLUG 4:** Rig up and perforate casing at 348 ft. Pump and circulate at least 109 sx cement down the 5-1/2 inch casing and up the 5-1/2 inch x 8-5/8 inch annulus, to emplace across the base of the casing shoe at 298 ft and up to the surface.

Attachment Q-2

UT21046-07093  
Harbourtown Federal #23-34

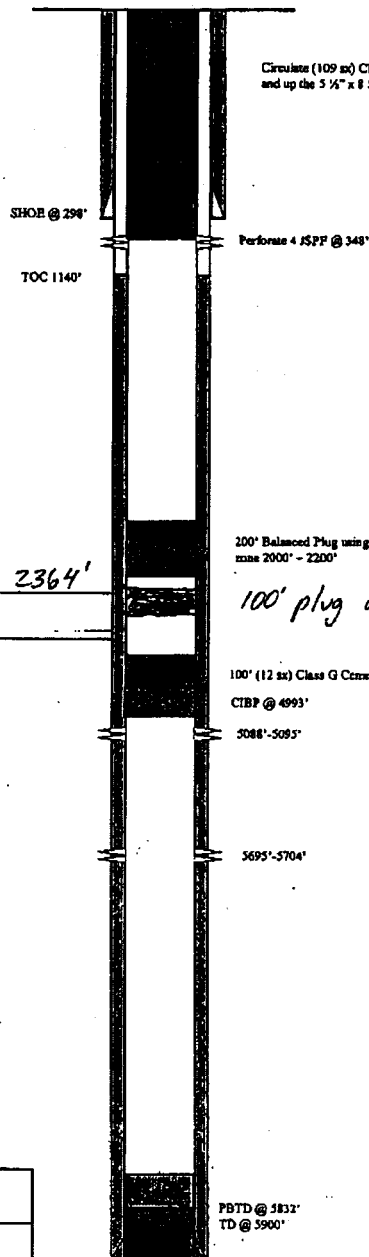
Spud Date: 3/23/98  
Put on Production: 11/28/03  
GL: 5088' KB: 5098'

Initial Production: 74 BOPD,  
20 GAS, 0 BWPD

SURFACE CASING

CSG SIZE: 8-5/8"  
GRADE:  
WEIGHT: 240  
LENGTH:  
DEPTH LANDED: 298'  
HOLE SIZE: 12 1/4"  
CEMENT DATA: 150 sbs cem.

Proposed P & A  
Wellbore Diagram



Circulate (109 ss) Class G Cement down 5 1/4" casing  
and up the 5 1/4" x 8 5/8" annulus

Perforate 4 ISPP @ 348'

TOC 1140'

PRODUCTION CASING

CSG SIZE: 5-1/2"  
GRADE:  
WEIGHT: 15.5W  
LENGTH: 134 ft  
DEPTH LANDED: 5880'  
HOLE SIZE: 8 1/4"  
CEMENT DATA: 470 sbs cement  
CEMENT TOP AT: 1140' per CBL

*Vintah Formation 2364'*

200' Balanced Plug using (25 ss) Class G Cement over water  
zone 2000' - 2200'

*100' plug across base of Vintah Formation  
@ 2364'*

100' (12 ss) Class G Cement plug on top of CIBP

CIBP @ 4993'

5088'-5095'

5695'-5704'

PBTD @ 5832'  
TD @ 5900'

**Inland Resources Inc.**  
Harbourtown Fed. 23-34  
1943' FSL & 2162' FWL  
NESW Section 34-T8S-R17E  
Duchesne Co, Utah  
API #43-013-31916 Lease #UTU-76955

MC 11/3/04

Harbourtown Fed 23-34-8-17 P&A.bmp

## **APPENDIX F**

### **CORRECTIVE ACTION REQUIREMENTS**

No corrective action is deemed necessary for this project.

# UNDERGROUND INJECTION CONTROL PROGRAM

## AQUIFER EXEMPTION

EPA PERMIT NO. UT21046-07093

Newfield Production Company

**TABLE 1.1**  
**AQUIFER EXEMPTION PROPOSAL(S)**  
**Harbourtown Federal 23-34-8-17**

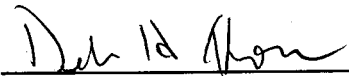
Formation Name	Top (ft)	Base (ft)	TDS (mg/l)
Douglas Creek Member, Green River Fm	4,814.00	6,200.00	9,775.00

The formation listed above is hereby exempted from protection as an underground source of drinking water (USDW) in compliance with provisions of the Safe Drinking Water Act as amended (42 USC 300f-300j-9, commonly known as the SDWA) and attendant regulations at Title 40 of the Code of Federal Regulations, within the subsurface interval shown and within a 1/4 mile radial distance from the surface location of the:

Harbourtown Federal 23-34-8-17  
Boundary  
1943 ft FSL 2162 ft FWL, NESW S34, T8S, R17E  
DUCHESNE County, UT

This aquifer exemption is granted in conjunction with an Underground Injection Control Permit issued for the injection of Class II fluids. This Aquifer Exemption has no expiration date.

The effective date of this exemption is AUG 21 2006

  
for Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

# **STATEMENT OF BASIS**

**NEWFIELD PRODUCTION COMPANY  
HARBOURTOWN FEDERAL 23-34-8-17  
DUCHESNE COUNTY, UT**

**EPA PERMIT NO. UT21046-07093**

***CONTACT:*** Dan Jackson  
U. S. Environmental Protection Agency  
Ground Water Program, 8P-W-GW  
999 18th Street, Suite 300  
Denver, Colorado 80202-2466  
Telephone: 1-800-227-8917 ext. 6155

This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

UIC Permits specify the conditions and requirements for construction, operation, monitoring and reporting, and plugging of injection wells to prevent the movement of fluids into underground sources of drinking water (USDWs). Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date when issued, the Permit authorizes the conversion and operation of a "new" injection well or wells governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).

## PART I. General Information and Description of Facility

Newfield Production Company  
1401 Seventeenth Street  
Suite 1000  
Denver, CO 80202

on

January 20, 2006

submitted an application for an Underground Injection Control (UIC) Program Permit or Permit Modification for the following injection well or wells:

Harbourtown Federal 23-34-8-17  
1943 ft FSL 2162 ft FWL, NESW S34, T8S, R17E  
DUCHESNE County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

The application, including the required information and data necessary to issue or modify a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed and determined by EPA to be complete.

The Harbourtown 23-34-8-17 is currently a shut-in Green River Formation production well. The applicant intends to convert the well to an enhanced recovery injection well to support existing Green River Formation enhanced oil recovery operations in the Greater Monument Butte Oil Field.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

TABLE 1.1		
WELL STATUS / DATE OF OPERATION		
CONVERSION WELLS		
Well Name	Well Status	Date of Operation
Harbourtown Federal 23-34-8-17	Conversion	N/A

## Hydrogeologic Setting

Water wells for domestic supply in this area, when present, generally are completed into the shallow alluvium, the Duchesne River Formation, or the underlying Uintah Formation, and the water generally contains approximately 500 to 1,500 mg/l and higher total dissolved solids.

The Uinta-Animas aquifer in the Uinta Basin is present in water-yielding beds of sandstone, conglomerate, and siltstone of the Duchesne River and Uinta Formations, the Renegade Tongue of the Wasatch Formation, and the Douglas Creek Member of the Green River Formation. The Renegade Tongue of the Wasatch Formation and the Douglas Creek Member of the Green River Formation contain an aquifer along the southern and eastern margins of the basin where the rocks primarily consist of fluvial, massive, irregularly bedded sandstone and siltstone. Water-yielding units in the Uinta-Animas aquifer in the Uinta Basin commonly are separated from each other and from the underlying Mesaverde aquifer by units of low permeability composed of claystone, shale, marlstone, or limestone. In the Uinta Basin, for example, the part of the aquifer in the Duchesne River and Uinta Formations ranges in thickness from 0 feet at the southern margin of the aquifer to as much as 9,000 feet in the north-central part of the aquifer. Ground-water recharge to the Uinta-Animas aquifer generally occurs in the areas of higher altitude along the margins of the basin. Ground water is discharged mainly to streams, springs, and by transpiration from vegetation growing along stream valleys. The rate of ground-water withdrawal is small, and natural discharge is approximately equal to recharge. Recharge occurs near the southern margin of the aquifer, and discharge occurs near the White and Green Rivers. (From USGS publication HA 730-C) Water samples from Mesaverde sands in the nearby Natural Buttes Unit yielded highly saline water.

### Geologic Setting (TABLE 2.1)

The proposed injection well is located in the Newfield Production Company Greater Monument Butte area near the center of the broad, gently northward dipping south flank of the Uinta Basin. The beds dip at about 200 ft/mile, and there are no known surface folds or faults in the field. Although the Tertiary Duchesne River Formation may occasionally be present at the surface in this area, usually the lower 600 ft to 800 ft of the Uinta Formation outcrops at the surface. The Uinta Formation, generally consisting of 5 ft to 20 ft interbedded lenticular fluvial sandstone and varicolored shale, is underlain by the Green River Formation which consists of lake (lacustrine) margin sandstones, limestone and shale beds that were deposited along the edges and on the broad level floor of Lake Uinta as it expanded and contracted through time. Deposition in and around Lake Uinta consisted of open to marginal lacustrine sediments that make up the Green River Formation. The cyclic nature of deposition in the southern shore area resulted in numerous stacked deltaic deposits. Distributary mouth bars, distributary channels, and near shore bars are the primary producing sandstone reservoirs in the area (Ref: "Reservoir Characterization of the Lower Green River Formation, Southwest Uinta Basin, Utah Biannual Technical Progress Report 4/1/99 9/30/99", by C. D. Morgan, Program Manager, November 1999, Contract DE AC26 98BC15103). The gross intervals over which porous sandstones occur are comprised of tight sandstone and interbedded shale forming the confining layers to the individual sandstone lenses. Underlying the Green River Formation is the Wasatch Formation, approximately 2,400' thick in this area, which consists of red alluvial shale and siltstone with scattered lenticular sandstone. The sediments that make up the Wasatch Formation were deposited mainly by streams flowing into the basin from the surrounding uplands. The mudstone and siltstone probably were deposited along flood plains, while the lenticular sand and conglomerate were laid down in stream channels. Where streams entered the lake tongues of deltaic deposits, sands or mudstones interfinger into the Green River Lake sediments. Below the Wasatch Formation is the Mesaverde Formation; a series

of interbedded continental deposits of shale, sandstone, and coal.

**TABLE 2.1**  
**GEOLOGIC SETTING**  
**Harbourtown Federal 23-34-8-17**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Uinta	0.00	2,364.00	< 10,000.00	interbedded lenticular fluvial sandstone, shale and siltstone
Green River	2,364.00	6,200.00	9,975.00 - 15,000.00	tight sandstone and interbedded shale forming confining layers between individual permeable lenticular sandstones
Wasatch	6,200.00	6,500.00		mudstone, siltstone, lenticular sandstone and conglomerate

**Proposed Injection Zone(s) (TABLE 2.2)**

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by a confining zone which is free of known open faults or fractures within the Area of Review.

The approved injection zone for enhanced recovery is the 2,045 ft interval within the Green River Formation between the top of the Garden Gulch Member 2-Marker at 4,155 feet to the top of the Wasatch Formation, estimated at 6,200 feet. The proposed interval for injection within the approved zone is the 609 ft interval bounded by perforations at 5,088 ft to 5,704 ft.

Based on production water analysis from the Harbourtown 23-34-8-17 well tank, the total dissolved solids (TDS) of a portion of the proposed injection zone in the Douglas Creek Member of the Green River Formation is 9,775 mg/l. This means the Douglas Creek Member of the Green River Formation is considered to be a USDW and must be exempted before injection may take place. The basis for the proposed aquifer exemption, pursuant to 40 CFR 146.4(b)(1), is that the zone is shown in the application to be hydrocarbon producing.

**TABLE 2.2**  
**INJECTION ZONES**  
**Harbourtown Federal 23-34-8-17**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Garden Gulch Member, Green River Fm	4,155.00	4,814.00	> 10,000.00	0.750	8.00%	N/A
Douglas Creek Member, Green River Fm	4,814.00	6,200.00	9,775.00	0.750	8.00%	P

\* C - Currently Exempted  
E - Previously Exempted  
P - Proposed Exemption  
N/A - Not Applicable

**Confining Zone(s) (TABLE 2.3)**

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

The Confining Zone is identified as the 185 ft interval of impermeable shale and interbedded tight sandstone within the upper Green River Formation Garden Gulch Member from 3,970 ft to 4,155 ft (KB).

**TABLE 2.3**  
**CONFINING ZONES**  
**Harbourtown Federal 23-34-8-17**

Formation Name	Formation Lithology	Top (ft)	Base (ft)
upper Green River	tight sandstone and interbedded shale forming confining	3,970.00	4,155.00

**Underground Sources of Drinking Water (USDWs) (TABLE 2.4)**

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

Technical Publication No. 92: State of Utah, Department of Natural Resources, maps the base of moderately saline ground water in the Uinta Formation at approximately 350 ft from the surface. A search of Division of Water Rights shows there are no water wells within a mile of the proposed injection well location. Water analyses of produced water from the Douglas Creek Member of the Green River Formation, a portion of the proposed injection zone, was shown to have total dissolved solids content of 9,775 mg/l.

**TABLE 2.4**  
**UNDERGROUND SOURCES OF DRINKING WATER (USDW)**  
**Harbourtown Federal 23-34-8-17**

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta	interbedded lenticular fluvial sandstone, shale and siltstone	0.00	2,364.00	< 10,000.00
Douglas Creek Member	tight sandstone and interbedded shale forming confining layers between individual permeable lenticular sandstones	4,814.00	6,200.00	9,775.00

**Exempted Aquifer(s) (40 CFR 144.7 and 146.4)**

Aquifers exempted from protection as a USDW are listed in TABLE 2.5. Exempted is that portion of the aquifer between the depths listed ("TOP" and "BASE") and within the Exempted Radius of the well's surface location, or for an Area Permit, one-quarter (1/4) mile exterior to the defined Area Permit boundary. "Criteria" corresponds to the appropriate criteria (below) for exemption. "VOLUME" is the maximum volume of fluid which can be injected into the exempted area before the injected fluids exceed the exemption boundary, calculated using the following formula:

$$V = \text{Pi} * \text{radius}^2 * \text{height} * \text{porosity} / 5.615$$

where V = VOLUME (in barrels)

Pi = 3.1416

radius<sup>2</sup> = Exempted Radius (squared) - generally 1/4 mile

height = height of reservoir ("BOTTOM" - "TOP")

porosity = reservoir porosity (in percent)

5.615 = conversion factor (cubic feet per barrel)

**TABLE 2.5**  
**AQUIFER EXEMPTION**  
**Harbourtown Federal 23-34-8-17**

Formation Name	Top (ft)	Base (ft)	Criteria	Volume (bbl)
Douglas Creek Member, Green River Fm	4,814.00	6,200.00	b(1)	108,094,200.00

**An aquifer or a portion thereof may be determined to be an "exempted aquifer" provided it meets criteria, listed below.**

- a It does not currently serve as a source of drinking water; AND
- b(1) It cannot now and will not in the future serve as a source of drinking water because it is mineral, hydrocarbon, or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible; OR

Based on production water analysis from the Harbortown 23-34-8-17 well tank, the total dissolved solids (TDS) of a portion of the proposed injection zone in the Douglas Creek Member of the Green River Formation is 9,775 mg/l. This means the Douglas Creek Member of the Green River Formation is considered to be a USDW and must be exempted before injection may take place. The basis for the proposed aquifer exemption, pursuant to 40 CFR 146.4(b)(1), is that the zone is shown in the application to be hydrocarbon producing.

- b(2) It cannot now and will not in the future serve as a source of drinking water because it is situated at a depth or location which makes recovery of water for drinking water purposes economically or technically impractical; OR
- b(3) It cannot now and will not in the future serve as a source of drinking water because it is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; OR
- b(4) It cannot now and will not in the future serve as a source of drinking water because it is located over a Class III well mining area subject to subsidence or catastrophic collapse; OR
- c The total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.

### PART III. Well Construction (40 CFR 146.22)

**TABLE 3.1**  
**WELL CONSTRUCTION REQUIREMENTS**  
**Harbortown Federal 23-34-8-17**

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
long string	8.25	5.50	0.00 - 5,880.00	1,140.00 - 5,832.00
surface	12.25	8.63	0.00 - 298.00	0.00 - 298.00

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

#### Casing and Cementing (TABLE 3.1)

The construction plan for the well or wells proposed for conversion to an injection well was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction and conversion details for the well or wells are shown in TABLE 3.1.

The well was drilled in March 1998 to a total depth of 5,900 ft, and began oil production from the Green River Formation in 2003. Surface casing was set at 298 ft below ground surface (BGS) and

cemented to surface using 150 sx cement. Long string casing was set at 5,880 ft and cemented with 470 sx cement to approximately 1,140 ft BGS by CBL, [1,279 ft BGS calculated].

### **Tubing and Packer**

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

For injection service a packer and tubing assembly are required. The tubing shall be of 2-7/8 inch or similar size, and the packer shall be set no more than 100 ft above the top perforation.

### **Tubing-Casing Annulus (TCA)**

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

### **Monitoring Devices**

The permittee will be required to install and maintain wellhead equipment that allows for monitoring pressures and providing access for sampling the injected fluid. Required equipment may include but is not limited to: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) fittings or pressure gauges attached to the injection tubing and the TCA for monitoring the injection and TCA pressure; and 4) a tap on the injection line, isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

## **PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)**

**TABLE 4.1  
AOR AND CORRECTIVE ACTION**

Well Name	Type	Status (Abandoned Y/N)	Total Depth (ft)	TOC Depth (ft)	CAP Required (Y/N)
Greater Boundary 10-34-8-17	Producer	No	6,289.00	240.00	No
Greater Boundary 14-34-8-17	Producer	No	6,130.00	100.00	No
Greater Boundary 6-34-8-17	Producer	No	6,220.00	304.00	No

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

### **Area Of Review**

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which

penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

There are no known surface folds or faults in the field.

There are three active producing oil wells within the area of review. The well construction information for each well has been reviewed, and is considered adequate to prevent migration of injected fluid out of the injection zone. Corrective action is not required at this time.

### Corrective Action Plan

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

TABLE 4.1 lists the wells in the AOR, and shows the well type, operating status, depth, top of casing cement and whether a CAP is required for this well.

## PART V. Well Operation Requirements (40 CFR 146.23)

**TABLE 5.1**  
**INJECTION ZONE PRESSURES**  
**Harbourtown Federal 23-34-8-17**

Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
Douglas Creek Member, Green River Fm	5,088.00	0.750	1,595
Garden Gulch Member, Green River Fm	5,088.00	0.750	1,595

### Approved Injection Fluid

The approved injection fluid is limited to Class II injection well fluids pursuant to 40 CFR § 144.6(b). For disposal wells injecting water brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production, the fluid may be commingled and the well used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Injection of non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, is prohibited.

The proposed injectate is a blend of source water from the Johnson Water District Reservoir with a TDS of 674 mg/l, occasionally blended with produced water with a TDS 9,775 mg/l at the Monument Butte Injection Facility.

### Injection Pressure Limitation

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs.

The Initial MAIP is 1,575 psi, based on a specific gravity of 1.008, a fracture gradient of .75 psi/ft and a top perforation of 5,088 ft.

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP), as measured at the surface, for this Permit,

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

FP = formation fracture pressure (measured at surface)

fg = fracture gradient (from submitted data or tests)

sg = specific gravity (of injected fluid)

d = depth to top of injection zone (or top perforation)

### Injection Volume Limitation

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

There is no restriction on the cumulative volume of authorized fluid injected into the approved injection zone, as long as the injection is for the purpose of enhanced recovery by waterflood.

### Mechanical Integrity (40 CFR 146.8)

An injection well has mechanical integrity if:

1. there is no significant leak in the casing, tubing, or packer (Part I); and
2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependent upon well-specific conditions as explained below.

**Part I MI** This well is constructed with a standard casing, tubing, and packer configuration. A successful demonstration of Part I (Internal) mechanical integrity (Part I MI), no significant leak in the casing, tubing or packer, is required prior to commencing injection and at least once every five years thereafter. Demonstration of Part I MI is also required prior to resuming injection following any workover operation that affects the casing, tubing, or packer. Part I MI may be demonstrated

by a standard tubing casing annulus pressure test using the maximum permitted injection pressure or 1,000 psi, whichever is less, with no greater than ten percent pressure loss over thirty minutes.

Part II MI The cement bond log (CBL) was run from 840 ft to 1,320 ft and from 3,950 ft to TD, across the confining zone from 3,970 ft to 4,155 ft. EPA analysis of the CBL indicates the presence of adequate cement to prevent significant fluid movement through vertical channels adjacent to the injection well bore, Part II (External) Mechanical Integrity (Part II MI), pursuant to standards of Region 8 GROUND WATER SECTION GUIDANCE NO. 34 - Cement Bond Logging Techniques And Interpretation. The CBL for this well shows 80% or greater bond minimally across the injection and confining zones. Therefore, further demonstration of Part II MI is not required at this time.

## **PART VI. Monitoring, Recordkeeping and Reporting Requirements**

### **Injection Well Monitoring Program**

At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, injection flow rate and cumulative fluid volume, and the maximum and average value for each must be determined for each month. This information is required to be reported annually as part of the Annual Report to the Director.

## **PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)**

### **Plugging and Abandonment Plan**

Prior to abandonment, the well or wells must be plugged with cement in a manner which will not allow the movement of fluids either into or between USDWs. The plugging and abandonment plan is described in Appendix E of the Permit.

The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with other applicable federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520 13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The permittee is required to also comply with other applicable federal, state and local plugging regulations. At a minimum, the following plugs are required:

PLUG 1: Remove tubing from the well, perform necessary clean out, and displace fluid in well with 9.6 lb. plugging gel. Set a cast iron bridge plug (CIBP) no more than 100 ft above the top perforation at 5,088, ft with a minimum 20 ft cement plug on top of the CIBP.

PLUG 2: Set a minimum 100 ft balanced cement plug across the base of the Uintah Formation at 2,364 ft.

PLUG 3: Set a minimum 200 ft balanced cement plug from approximately 2,000 to 2,200 ft.

PLUG 4: Rig up and perforate casing at 348 ft. Pump and circulate at least 109 sx cement down the 5-1/2 inch casing and up the 5-1/2 inch x 8-5/8 inch annulus, to emplace cement across the base of the casing shoe at 298 ft and up to the surface.

## **PART VIII. Financial Responsibility (40 CFR 144.52)**

### **Demonstration of Financial Responsibility**

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

The applicant submitted an estimate of \$33,025 for the P&A of this well.

Financial Statement, received April 22, 2005

Evidence of continuing financial responsibility is required to be submitted to the Director annually.

Financial responsibility is being demonstrated through submittal of annual statements that must continue to meet the EPA financial test requirements for adequate corporate guarantee.

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER:  
USA UTU-76955

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ OTHER

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:  
GREATER BOUNDARY II

2. NAME OF OPERATOR:  
NEWFIELD PRODUCTION COMPANY

8. WELL NAME and NUMBER:  
HARBOURTOWN FED 23-34

3. ADDRESS OF OPERATOR:  
Route 3 Box 3630 CITY Myton STATE UT ZIP 84052

PHONE NUMBER  
435.646.3721

9. API NUMBER:  
4301331916

4. LOCATION OF WELL:  
FOOTAGES AT SURFACE: 1943 FSL 2162 FWL

10. FIELD AND POOL, OR WILDCAT:  
MONUMENT BUTTE

COUNTY: DUCHESNE

OTR/OTR. SECTION. TOWNSHIP. RANGE. MERIDIAN: NESW, 34, T8S, R17E

STATE: UT

II. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will  	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARITLY ABANDON	
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLAIR	
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of Work Completion:  12/05/2006	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL	
	<input checked="" type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/STOP)	<input type="checkbox"/> WATER SHUT-OFF	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: -	
	<input checked="" type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION		

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The subject well has been converted from a producing oil well to an injection well on 12/5/06. One new interval was added, the CP2 sds 5753'-5762'4 JSPF. On 11/28/06 Dan Jackson with the EPA was contacted concerning the initial MIT on the above listed well. Permission was given at that time to perform the test on 12/29/06. On 12/29/06 the casing was pressured up to 1550 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 260 psig during the test. There was not an EPA representative available to witness the test.  
EPA# UT 21046-07093 API# 43-013-31916

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

NAME (PLEASE PRINT) Callie Ross

TITLE Production Clerk

SIGNATURE

*Callie Ross*

DATE 01/12/2007

(This space for State use only)

**RECEIVED**  
**JAN 16 2007**  
DIV. OF OIL, GAS & MINING

# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_ Date: 12/29/06  
Test conducted by: Dale Giles  
Others present: \_\_\_\_\_

Well Name: <u>Harbourtown Fed. 23-34-8-17</u>		Type: <u>ER SWD</u>	Status: <u>AC TA UC</u>
Field: <u>Greater Boundary Unit</u>			
Location: _____	Sec: <u>34</u>	T <u>8</u>	N <u>10</u> R <u>17</u> E/W
County: <u>Duchesne</u>		State: <u>UT</u>	
Operator: <u>Newfield Production Co.</u>			
Last MIT: _____		Maximum Allowable Pressure: _____ PSIG	

Is this a regularly scheduled test? ☐ Yes ☐ No  
Initial test for permit? ☒ Yes ☐ No  
Test after well rework? ☐ Yes ☐ No  
Well injecting during test? ☐ Yes ☐ No If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: 0 psig

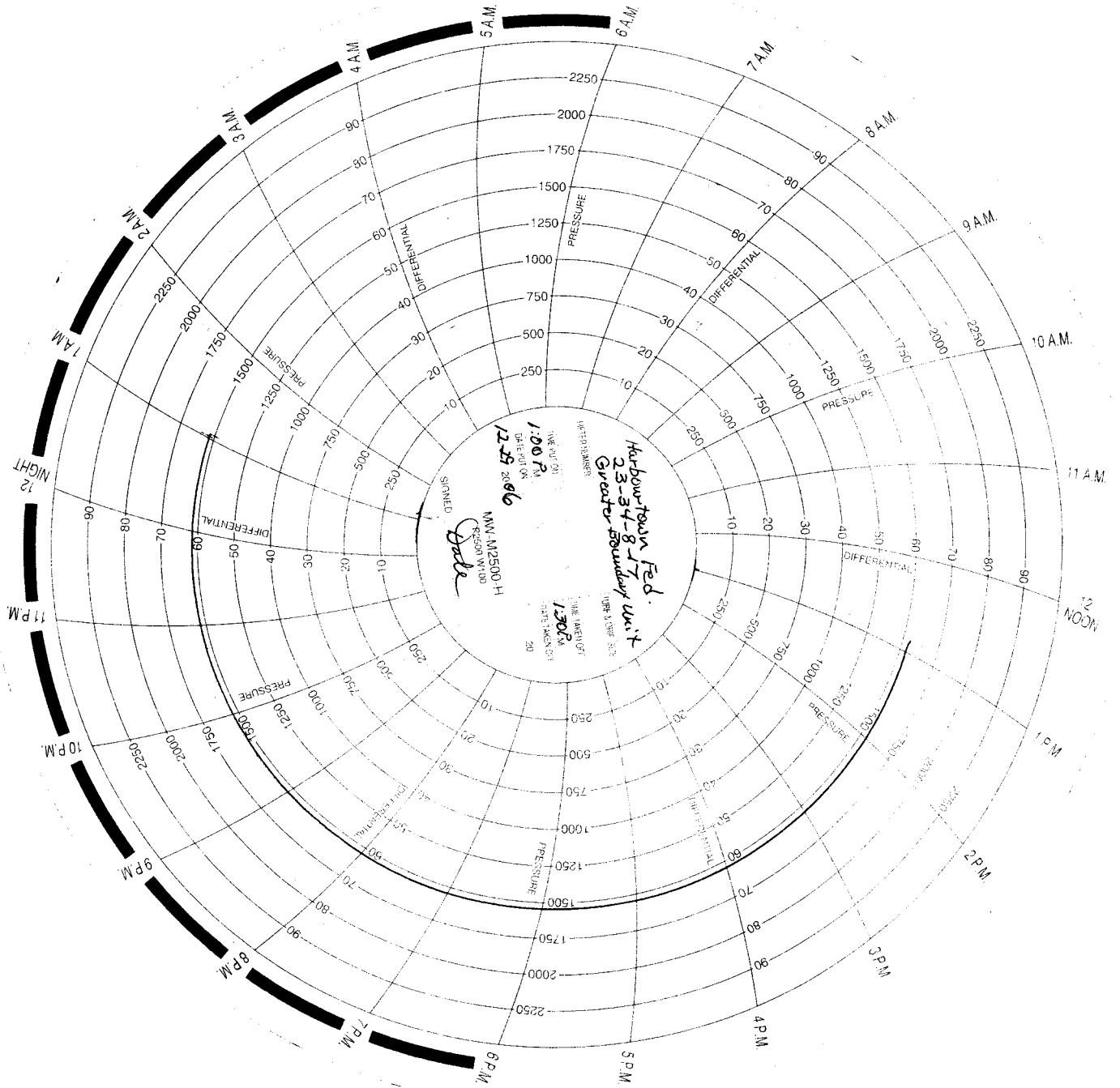
MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	<u>260</u> psig	psig	psig
End of test pressure	<u>260</u> psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	<u>1550</u> psig	psig	psig
5 minutes	<u>1550</u> psig	psig	psig
10 minutes	<u>1550</u> psig	psig	psig
15 minutes	<u>1550</u> psig	psig	psig
20 minutes	<u>1550</u> psig	psig	psig
25 minutes	<u>1550</u> psig	psig	psig
30 minutes	<u>1550</u> psig	psig	psig
_____ minutes	psig	psig	psig
_____ minutes	psig	psig	psig
<b>RESULT</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Does the annulus pressure build back up after the test ? ☐ Yes ☒ No

## MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness: \_\_\_\_\_



**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER:  
USA UTU-76955

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: NEWFIELD PRODUCTION COMPANY		7. UNIT or CA AGREEMENT NAME: GREATER BOUNDARY II
3. ADDRESS OF OPERATOR: Route 3 Box 3630 CITY Myton STATE UT ZIP 84052	PHONE NUMBER 435.646.3721	8. WELL NAME and NUMBER: HARBOURTOWN FED 23-34
4. LOCATION OF WELL: FOOTAGES AT SURFACE: 1943 FSL 2162 FWL		9. API NUMBER: 4301331916
OTR/OTR. SECTION. TOWNSHIP. RANGE. MERIDIAN: NESW, 34, T8S, R17E		10. FIELD AND POOL, OR WILDCAT: MONUMENT BUTTE
		COUNTY: DUCHESNE
		STATE: UT

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA


TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will 05/04/2007	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLAIR
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of Work Completion:	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/STOP)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: - Change status, put well on injection
	<input checked="" type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The above reference well was put on injection at 5:15 PM on 6-1-07.  
UIC# UT21046-07093

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY

RECEIVED  
JUN 06 2007  
DIV. OF OIL, GAS & MINING

NAME (PLEASE PRINT) <u>Kathy Chapman</u>	TITLE <u>Office Manager</u>
SIGNATURE 	DATE <u>06/04/2007</u>

(This space for State use only)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

1595 Wynkoop Street  
DENVER, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

Ref: 8P-W-GW

NOV - 6 2007

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Mr. Michael Guinn  
Vice President - Operations  
Newfield Production Company  
Route 3-Box 3630  
Myton, UT 84502

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY

43.013.31916

RE: Authority to Commence Injection  
EPA UIC Permit UT21046-07093  
Well: Harbourtown 23-34-8-17  
Duchesne County, Utah

Dear Mr. Guinn:

Thank you for submitting information pertaining to the newly converted Harbourtown 23-34-8-17 enhance recovery injection well to the Region 8 Ground Water Program office of the Environmental Protection Agency (EPA). The "Prior to Commencing Injection" requirements for the Harbourtown 23-34-8-17 injection well required the owner and operator Newfield Production Company to submit the following information to the Director:

1. A successful mechanical integrity test (MIT) demonstrating Part I Internal MI,
2. Pore pressure calculation of the proposed injection zone, and
3. Completed EPA Form No. 7520-12.

Newfield Production Company, as of the date of this letter, is authorized to commence injection into the Harbourtown 23-34-8-17. Until such time that the permittee demonstrates through a Step-Rate Test (SRT) that the Fracture Gradient (FG) is other than 0.75 psi/ft, the Harbourtown 23-34-8-17 shall be operated at a **maximum allowable injection pressure no greater than 1575 psi**.

As of this approval, responsibility for Permit compliance and enforcement is transferred to the Region 8 UIC Technical Enforcement Program office. Therefore, please direct all future

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NOV 16 2007

DIV. OF OIL, GAS & MINING

notification, reporting monitoring and compliance correspondence to the following address, referencing your well and UIC Permit number on all correspondence regarding this well:

Technical Enforcement Program – UIC  
U.S. EPA Region 8, MC: 8ENF-UFO  
1595 Wynkoop Street  
Denver, CO 80202-1129

Please be reminded that it is your responsibility to be aware of and to comply with all conditions of well Permit UT21046-07093. If you have any questions in regard to the above action, please contact Tricia Pfeiffer at 1-800-227-8917 (ext. 312-6271) or 303-312-6271.

Sincerely,



for Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

cc:

Curtis Cesspooch, Chairperson  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Ronald Groves, Councilman  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Irene Cuch, Vice-Chairperson  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Steven Cesspooch, Councilman  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Phillip Chimburas, Councilman  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Francis Poowegup, Councilman  
Uintah & Ouray Business Committee  
Ute Indian Tribe

Chester Mills, Superintendent  
BIA - Uintah & Ouray Indian Agency

David Gerbig  
Operations Engineer  
Newfield Production Company

Shawn Chapoose, Director  
Land Use Department  
Ute Indian Tribe

Gil Hunt  
Associate Director  
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office  
BLM - Vernal Office

Lynn Becker, Director  
Energy and Minerals Department  
Ute Indian Tribe

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>WD</u>		5. LEASE DESIGNATION AND SERIAL NUMBER: USA UTU-76955
2. NAME OF OPERATOR: NEWFIELD PRODUCTION COMPANY		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: GMBU
3. ADDRESS OF OPERATOR: Route 3 Box 3630 CITY Myton STATE UT ZIP 84052		7. UNIT or CA AGREEMENT NAME: GMBU
4. LOCATION OF WELL: FOOTAGES AT SURFACE: 1943 FSL 2162 FWL		8. WELL NAME and NUMBER: HARBOURTOWN FED 23-34
OTR/OTR. SECTION. TOWNSHIP. RANGE. MERIDIAN: NESW, 34, T8S, R17E		9. API NUMBER: 4301331916
		10. FIELD AND POOL, OR WILDCAT: GREATER MB UNIT
		COUNTY: DUCHESNE
		STATE: UT

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

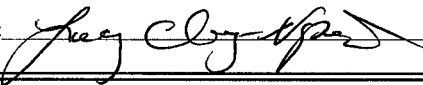
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of Work Completion: 05/20/2010	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/STOP)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: - Step Rate Test
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

A step rate test was conducted on the subject well on May 20, 2010. Results from the test indicate that the fracture gradient is .759 psi/ft. Therefore, Newfield is requesting that the maximum allowable injection pressure (MAIP) be changed from 1520 psi to 1625 psi.

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY

NAME (PLEASE PRINT) Lucy Chavez-Naupoto TITLE Administrative Assistant

SIGNATURE 

DATE 06/04/2010

(This space for State use only)

RECEIVED

JUN 14 2010

DIV. OF OIL, GAS & MINING

## Step Rate Test (SRT) Analysis

Date: 06/04/2010

Operator:

Newfield Production Company

Well:

HARBOURTOWN FEDERAL 23-34-8-17

Permit #:

UT21046-07093

**Enter the following data :**

Specific Gravity (sg) of injectate =	<u>1.015</u>	g/cc	
Depth to top perforation (D) =	<u>5088</u>	feet	5088
Top of permitted injection zone depth (blank=use top perforation to calculate fg) =		feet	
Estimated Formation Parting Pressure (Pfp) from SRT chart =	<u>1660</u>	psi	1660
Instantaneous Shut In Pressure (ISIP) from SRT =	<u>1626</u>	psi	1626
Bottom Hole Parting Pressure (Pbhp) from downhole pressure recorder =		psi	no downhole

### Part One - Calculation of Fracture Gradient (fg)

**Calculated Fracture Gradient =** 0.759 psi/ft.

where:  $fg = Pbhp / D$  (Note: this formula uses the downhole recorded bottom hole parting pressure if available) = 1626

D = depth used = 5088

Pbhp used = 3862

**Calculated Bottom Hole Parting Pressure (Pbhp) =** 3862 psi

3862.151

to calculate Bottom Hole Parting Pressure (Pbhp) = Formation Fracture Pressure (ISIP or Pfp) + (0.433 \* SG \* D)

(Uses lesser of ISIP or Pfp) Value used = 1626

### Part Two - Calculation of Maximum Allowable Injection Pressure (MAIP)

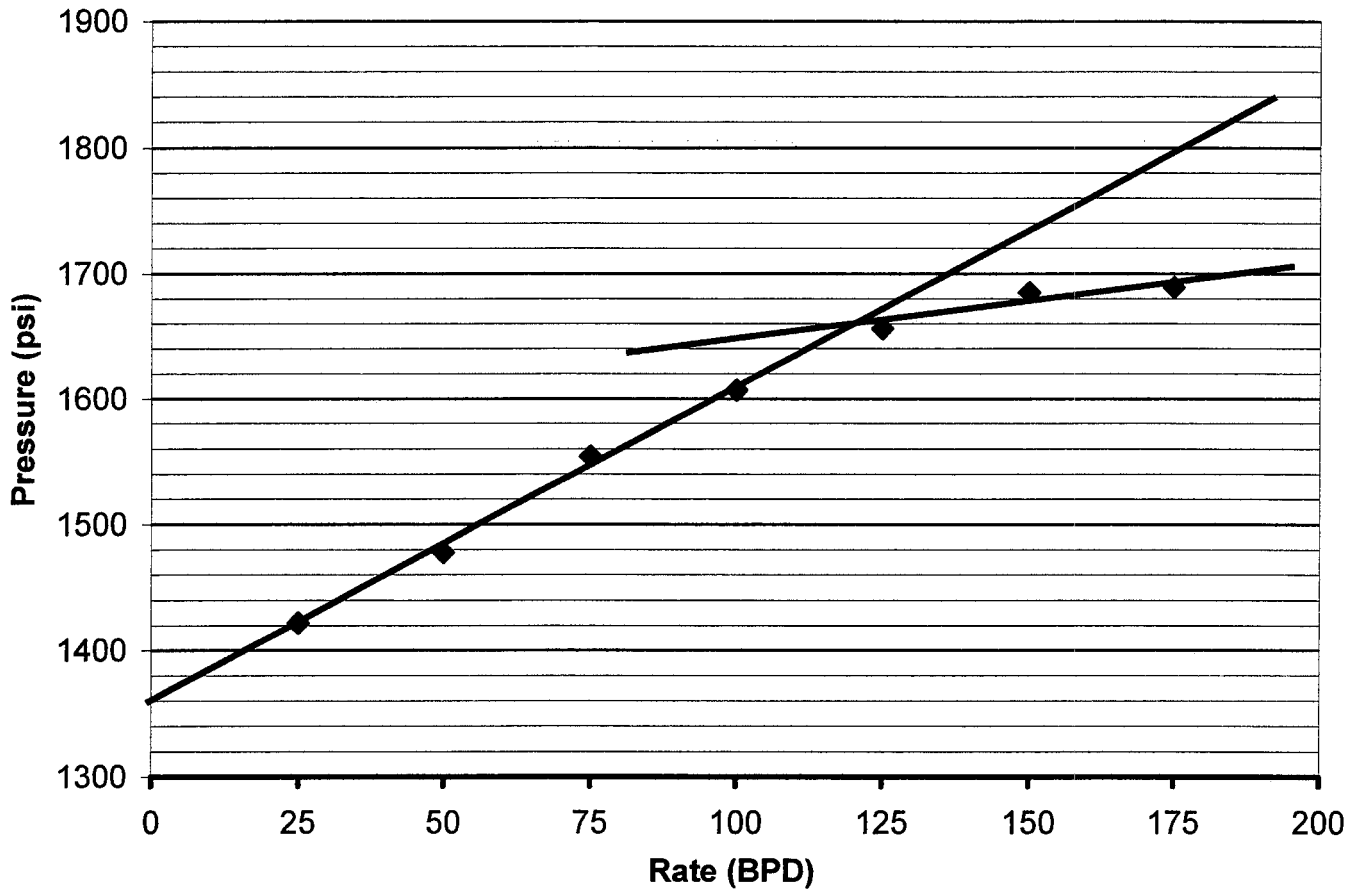
**Maximum Allowable Injection Pressure (MAIP) =** 1625 psig

D = depth used = 5088

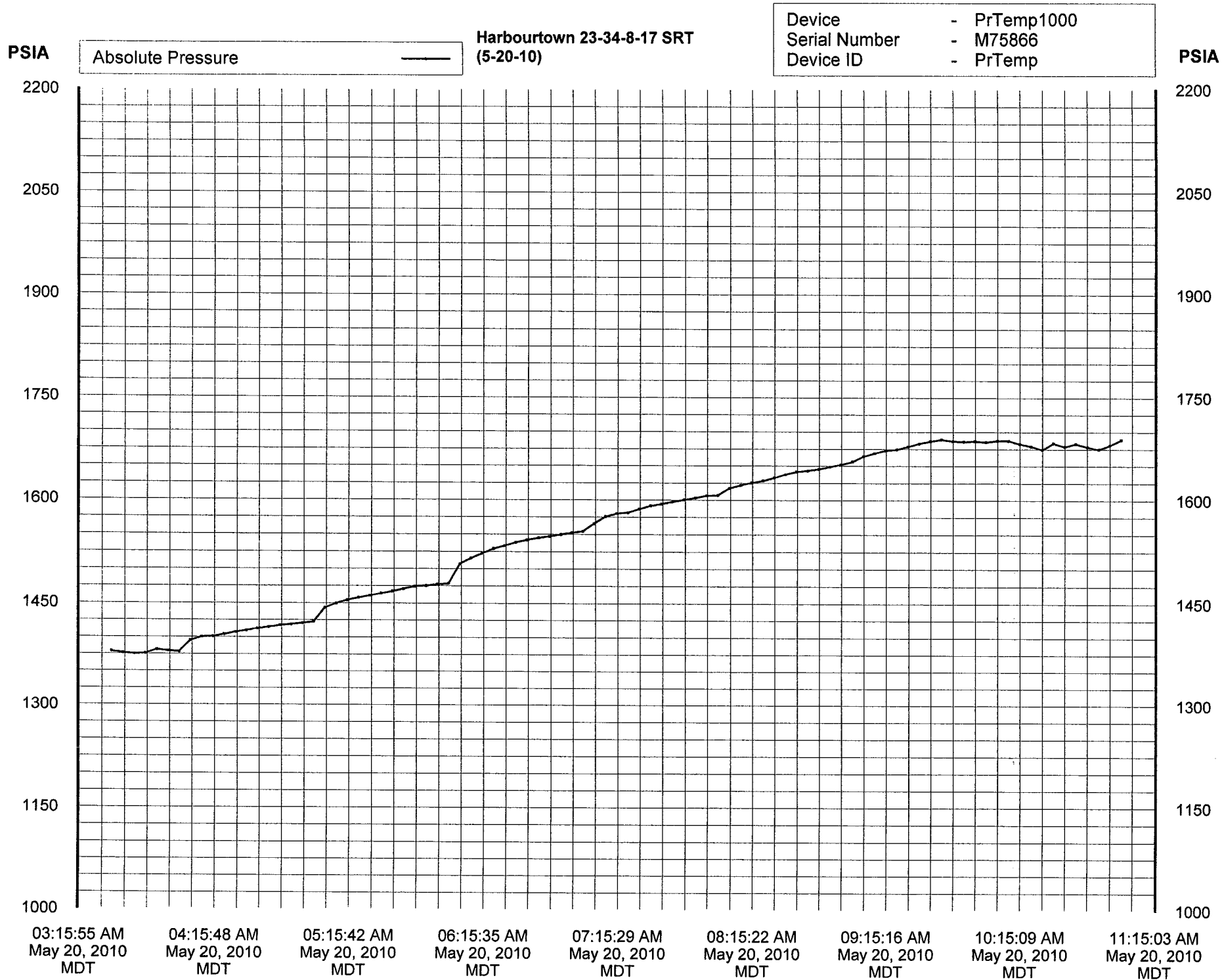
MAIP =  $[fg \cdot (0.433 \cdot SG)] \cdot D = 1625.641$

(rounded down to nearest 5 psig)

**Harbortown 23-34-8-17**  
**Greater Monument Butte Unit**  
**Step Rate Test**  
**May 20, 2010**



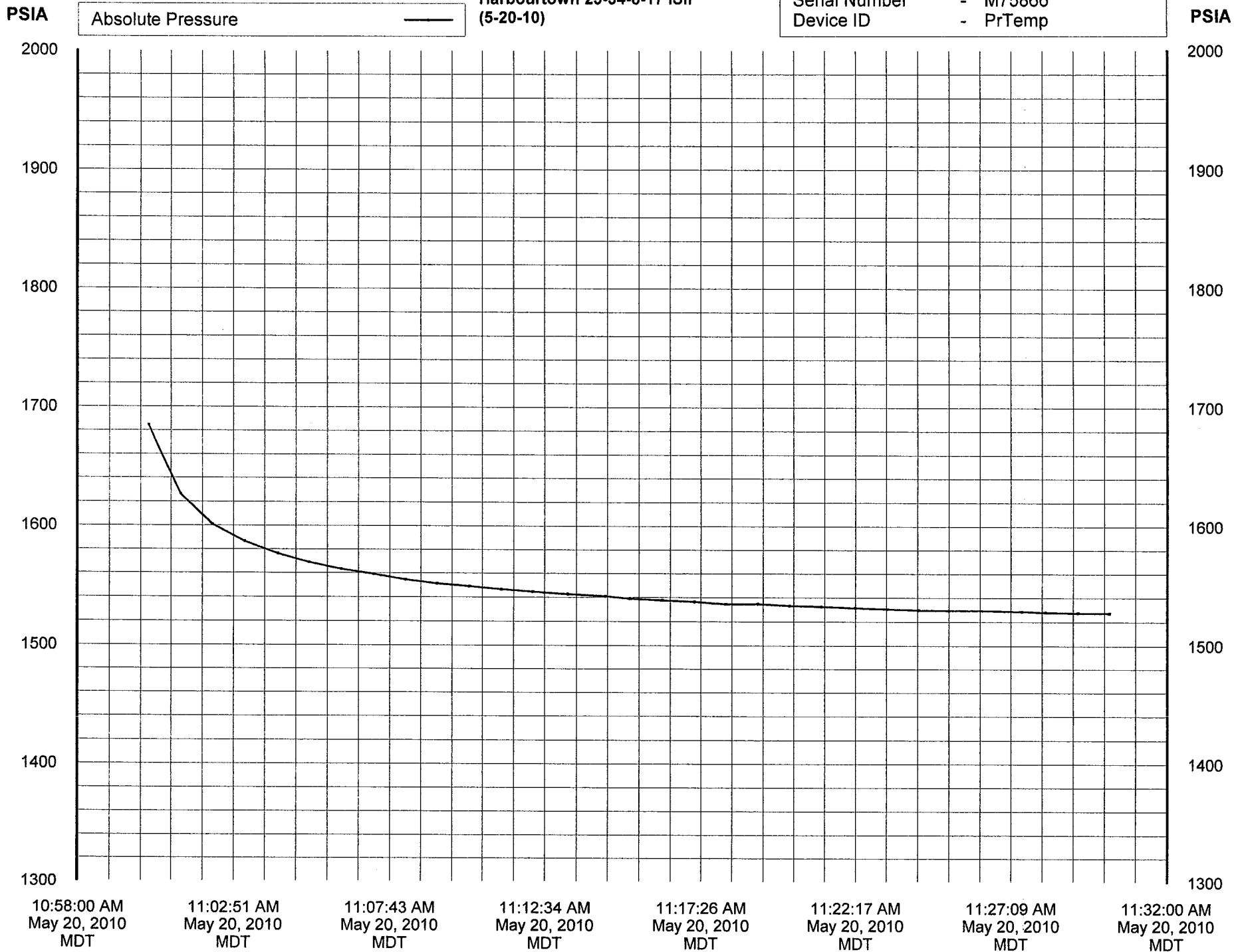
		Step	Rate(bpd)	Pressure(psi)
Start Pressure:	1378 psi	1	25	1422
Instantaneous Shut In Pressure (ISIP):	1626 psi	2	50	1478
Top Perforation:	5088 feet	3	75	1554
Fracture pressure (Pfp):	1660 psi	4	100	1607
FG:	0.766 psi/ft	5	125	1656
		6	150	1685
		7	175	1689



Report Name: PrTemp1000 Data Table  
 Report Date: May 21, 2010 11:56:27 AM MDT  
 File Name: C:\Program Files\PTC® Instruments 2.00\Harbortown 23-34-8-17 SRT (5-20-10).csv  
 Title: Harbortown 23-34-8-17 SRT (5-20-10)  
 Device: PrTemp1000 - Temperature and Pressure Recorder  
 Hardware Revision: REV2C (64K)  
 Serial Number: M75866  
 Device ID: PrTemp  
 Data Start Date: May 20, 2010 03:29:59 AM MDT  
 Data End Date: May 20, 2010 11:00:00 AM MDT  
 Reading Rate: 2 Seconds  
 Readings: 1 to 91 of 91  
 Last Calibration Date: May 22, 2009  
 Next Calibration Date: May 22, 2010

<u>Reading</u>	<u>Date and Time (MDT)</u>	<u>Absolute Pressure</u>	<u>Annotation</u>
1	May 20, 2010 03:29:59 AM	1378.600	PSIA
2	May 20, 2010 03:35:00 AM	1376.200	PSIA
3	May 20, 2010 03:40:00 AM	1374.800	PSIA
4	May 20, 2010 03:45:00 AM	1375.600	PSIA
5	May 20, 2010 03:50:00 AM	1381.200	PSIA
6	May 20, 2010 03:55:00 AM	1379.400	PSIA
7	May 20, 2010 04:00:00 AM	1378.200	PSIA
8	May 20, 2010 04:05:01 AM	1394.800	PSIA
9	May 20, 2010 04:10:00 AM	1400.000	PSIA
10	May 20, 2010 04:15:00 AM	1400.600	PSIA
11	May 20, 2010 04:20:00 AM	1403.600	PSIA
12	May 20, 2010 04:25:03 AM	1407.000	PSIA
13	May 20, 2010 04:30:00 AM	1409.400	PSIA
14	May 20, 2010 04:35:00 AM	1412.400	PSIA
15	May 20, 2010 04:40:00 AM	1414.600	PSIA
16	May 20, 2010 04:45:00 AM	1417.200	PSIA
17	May 20, 2010 04:50:00 AM	1418.600	PSIA
18	May 20, 2010 04:55:00 AM	1420.400	PSIA
19	May 20, 2010 05:00:00 AM	1422.400	PSIA
20	May 20, 2010 05:05:00 AM	1442.800	PSIA
21	May 20, 2010 05:10:00 AM	1449.400	PSIA
22	May 20, 2010 05:15:00 AM	1454.000	PSIA
23	May 20, 2010 05:20:00 AM	1457.600	PSIA
24	May 20, 2010 05:25:00 AM	1460.800	PSIA
25	May 20, 2010 05:30:00 AM	1464.000	PSIA
26	May 20, 2010 05:35:00 AM	1467.000	PSIA
27	May 20, 2010 05:40:00 AM	1470.600	PSIA
28	May 20, 2010 05:45:00 AM	1474.200	PSIA
29	May 20, 2010 05:50:00 AM	1475.200	PSIA
30	May 20, 2010 05:55:00 AM	1477.200	PSIA
31	May 20, 2010 06:00:00 AM	1478.400	PSIA
32	May 20, 2010 06:05:00 AM	1507.000	PSIA
33	May 20, 2010 06:10:00 AM	1515.400	PSIA
34	May 20, 2010 06:15:00 AM	1522.600	PSIA
35	May 20, 2010 06:20:00 AM	1529.000	PSIA
36	May 20, 2010 06:25:00 AM	1533.400	PSIA
37	May 20, 2010 06:30:00 AM	1538.200	PSIA
38	May 20, 2010 06:35:00 AM	1541.600	PSIA
39	May 20, 2010 06:40:00 AM	1544.800	PSIA
40	May 20, 2010 06:45:00 AM	1546.800	PSIA
41	May 20, 2010 06:50:00 AM	1549.600	PSIA
42	May 20, 2010 06:55:00 AM	1552.200	PSIA
43	May 20, 2010 07:00:00 AM	1554.200	PSIA
44	May 20, 2010 07:05:00 AM	1565.600	PSIA
45	May 20, 2010 07:10:00 AM	1575.800	PSIA
46	May 20, 2010 07:15:00 AM	1580.000	PSIA
47	May 20, 2010 07:20:00 AM	1581.400	PSIA
48	May 20, 2010 07:25:00 AM	1586.600	PSIA
49	May 20, 2010 07:30:00 AM	1591.400	PSIA
50	May 20, 2010 07:35:00 AM	1594.000	PSIA
51	May 20, 2010 07:40:00 AM	1597.600	PSIA
52	May 20, 2010 07:45:00 AM	1600.200	PSIA
53	May 20, 2010 07:50:00 AM	1603.000	PSIA
54	May 20, 2010 07:55:00 AM	1606.400	PSIA
55	May 20, 2010 08:00:00 AM	1607.000	PSIA
56	May 20, 2010 08:05:00 AM	1617.200	PSIA
57	May 20, 2010 08:10:00 AM	1622.000	PSIA
58	May 20, 2010 08:15:00 AM	1625.600	PSIA
59	May 20, 2010 08:20:00 AM	1628.400	PSIA

60	May 20, 2010 08:25:00 AM	1632.800	PSIA
61	May 20, 2010 08:30:00 AM	1637.800	PSIA
62	May 20, 2010 08:35:00 AM	1641.600	PSIA
63	May 20, 2010 08:40:00 AM	1643.200	PSIA
64	May 20, 2010 08:45:00 AM	1645.400	PSIA
65	May 20, 2010 08:50:00 AM	1648.800	PSIA
66	May 20, 2010 08:55:00 AM	1652.000	PSIA
67	May 20, 2010 09:00:00 AM	1656.200	PSIA
68	May 20, 2010 09:05:00 AM	1664.200	PSIA
69	May 20, 2010 09:10:00 AM	1668.800	PSIA
70	May 20, 2010 09:15:00 AM	1672.800	PSIA
71	May 20, 2010 09:20:00 AM	1674.400	PSIA
72	May 20, 2010 09:25:00 AM	1678.800	PSIA
73	May 20, 2010 09:30:00 AM	1683.000	PSIA
74	May 20, 2010 09:35:00 AM	1686.600	PSIA
75	May 20, 2010 09:40:00 AM	1689.000	PSIA
76	May 20, 2010 09:45:00 AM	1686.800	PSIA
77	May 20, 2010 09:50:00 AM	1686.000	PSIA
78	May 20, 2010 09:55:00 AM	1686.800	PSIA
79	May 20, 2010 10:00:00 AM	1685.400	PSIA
80	May 20, 2010 10:05:00 AM	1687.400	PSIA
81	May 20, 2010 10:10:00 AM	1687.400	PSIA
82	May 20, 2010 10:15:00 AM	1682.800	PSIA
83	May 20, 2010 10:20:00 AM	1679.400	PSIA
84	May 20, 2010 10:25:00 AM	1674.400	PSIA
85	May 20, 2010 10:30:00 AM	1683.800	PSIA
86	May 20, 2010 10:35:00 AM	1679.000	PSIA
87	May 20, 2010 10:40:00 AM	1683.000	PSIA
88	May 20, 2010 10:45:00 AM	1678.400	PSIA
89	May 20, 2010 10:50:04 AM	1675.000	PSIA
90	May 20, 2010 10:55:00 AM	1681.200	PSIA
91	May 20, 2010 11:00:00 AM	1688.800	PSIA



Report Name: PrTemp1000 Data Table  
 Report Date: May 21, 2010 11:56:20 AM MDT  
 File Name: C:\Program Files\PTC® Instruments 2.00\Harbortown 23-34-8-17 ISIP (5-20-10).csv  
 Title: Harbortown 23-34-8-17 ISIP (5-20-10)  
 Device: PrTemp1000 - Temperature and Pressure Recorder  
 Hardware Revision: REV2C (64K)  
 Serial Number: M75866  
 Device ID: PrTemp  
 Data Start Date: May 20, 2010 11:00:12 AM MDT  
 Data End Date: May 20, 2010 11:30:13 AM MDT  
 Reading Rate: 2 Seconds  
 Readings: 1 to 31 of 31  
 Last Calibration Date: May 22, 2009  
 Next Calibration Date: May 22, 2010

<u>Reading</u>	<u>Date and Time (MDT)</u>	<u>Absolute Pressure</u>	<u>Annotation</u>
1	May 20, 2010 11:00:12 AM	1684.400	PSIA
2	May 20, 2010 11:01:13 AM	1626.200	PSIA
3	May 20, 2010 11:02:12 AM	1600.800	PSIA
4	May 20, 2010 11:03:12 AM	1586.600	PSIA
5	May 20, 2010 11:04:13 AM	1576.400	PSIA
6	May 20, 2010 11:05:12 AM	1569.000	PSIA
7	May 20, 2010 11:06:12 AM	1563.400	PSIA
8	May 20, 2010 11:07:13 AM	1559.200	PSIA
9	May 20, 2010 11:08:13 AM	1554.600	PSIA
10	May 20, 2010 11:09:12 AM	1551.400	PSIA
11	May 20, 2010 11:10:13 AM	1549.200	PSIA
12	May 20, 2010 11:11:13 AM	1546.600	PSIA
13	May 20, 2010 11:12:12 AM	1544.600	PSIA
14	May 20, 2010 11:13:17 AM	1542.600	PSIA
15	May 20, 2010 11:14:27 AM	1541.000	PSIA
16	May 20, 2010 11:15:12 AM	1539.000	PSIA
17	May 20, 2010 11:16:12 AM	1537.600	PSIA
18	May 20, 2010 11:17:13 AM	1536.400	PSIA
19	May 20, 2010 11:18:12 AM	1534.600	PSIA
20	May 20, 2010 11:19:12 AM	1534.800	PSIA
21	May 20, 2010 11:20:13 AM	1533.200	PSIA
22	May 20, 2010 11:21:12 AM	1532.600	PSIA
23	May 20, 2010 11:22:17 AM	1531.600	PSIA
24	May 20, 2010 11:23:18 AM	1530.600	PSIA
25	May 20, 2010 11:24:16 AM	1529.800	PSIA
26	May 20, 2010 11:25:12 AM	1529.400	PSIA
27	May 20, 2010 11:26:13 AM	1529.400	PSIA
28	May 20, 2010 11:27:29 AM	1528.600	PSIA
29	May 20, 2010 11:28:13 AM	1528.000	PSIA
30	May 20, 2010 11:29:14 AM	1527.400	PSIA
31	May 20, 2010 11:30:13 AM	1527.200	PSIA

# Harbourtown 23-34-8-17 Rate Sheet (5-20-10)

<b>Step # 1</b>	Time:	4:05	4:10	4:15	4:20	4:25	4:30
	Rate:	25.4	25.4	25.3	25.3	25.3	25.2
	Time:	4:35	4:40	4:45	4:50	4:55	5:00
	Rate:	25.2	25.2	25.2	25.2	25.2	25.1
<b>Step # 2</b>	Time:	5:05	5:10	5:15	5:20	5:25	5:30
	Rate:	50.5	50.5	50.5	50.5	50.5	50.4
	Time:	5:35	5:40	5:45	5:50	5:55	6:00
	Rate:	50.4	50.4	50.4	50.3	50.3	50.3
<b>Step # 3</b>	Time:	6:05	6:10	6:15	6:20	6:25	6:30
	Rate:	75.5	75.5	75.5	75.4	75.4	75.4
	Time:	6:35	6:40	6:45	6:50	6:55	7:00
	Rate:	75.3	75.3	75.3	75.3	75.2	75.2
<b>Step # 4</b>	Time:	7:05	7:10	7:15	7:20	7:25	7:30
	Rate:	100.5	100.4	100.4	100.3	100.3	100.3
	Time:	7:35	7:40	7:45	7:50	7:55	8:00
	Rate:	100.3	100.2	100.2	100.2	100.1	100.1
<b>Step # 5</b>	Time:	8:05	8:10	8:15	8:20	8:25	8:30
	Rate:	125.4	125.4	125.4	125.3	125.3	125.3
	Time:	8:35	8:40	8:45	8:50	8:55	9:00
	Rate:	125.3	125.2	125.2	125.1	125.1	125.1
<b>Step # 6</b>	Time:	9:05	9:10	9:15	9:20	9:25	9:30
	Rate:	150.4	150.4	150.3	150.3	150.3	150.3
	Time:	9:35	9:40	9:45	9:50	9:55	10:00
	Rate:	150.3	150.3	150.3	150.2	150.1	150.1
<b>Step # 7</b>	Time:	10:05	10:10	10:15	10:20	10:25	10:30
	Rate:	175.4	175.4	175.4	175.4	175.4	175.4
	Time:	10:35	10:40	10:45	10:50	10:55	11:00
	Rate:	175.4	175.3	175.1	175.1	175.1	175.1
	Time:						
	Rate:						
	Time:						
	Rate:						



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

1595 Wynkoop Street  
Denver, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

**JUL 13 2010**

Ref: 8P-W-GW

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Mr. Michael Guinn  
District Manager  
Newfield Production Company  
Route 3-Box 3630  
Myton, UT 84502

**RECEIVED**

**JUL 28 2010**

**DIV. OF OIL, GAS & MINING**

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

RE: Underground Injection Control (UIC)  
Minor Permit Modification  
EPA UIC Permit UT21046-07093  
Well: <sup>Lok</sup>Harbourtown Federal 23-34-8-17  
NESW Sec. 34-T8S-R17E  
Duchesne County, UT  
API No.: 43-013-31241 **31916**

Dear Mr. Guinn:

The Environmental Protection Agency Region 8 (EPA) has received Newfield Production Company's (Newfield) June 4, 2010, letter with enclosures requesting an increase in the Maximum Allowable Injection Pressure (MAIP) for the Harbourtown Federal 23-34-8-17 well. The enclosed Step Rate Test (SRT) was reviewed and approved by EPA. Therefore, the MAIP for UIC Permit UT21046-07093 is hereby increased to 1,625 psig from the 1,520 psig previously authorized.

You may apply for a higher MAIP at a later date. Your application should be accompanied by the interpreted results of a SRT that measures the fracture parting pressure and determines the fracture gradient at the injection depth and location. A current copy of EPA guidelines for running and interpreting a SRT will be sent upon request.

Please continue to direct all notification, reporting, monitoring and compliance correspondence to the following address, referencing the well name and UIC Permit number on all correspondence regarding this well:

US EPA, Region 8  
Attn: Nathan Wiser  
MC: ENF-UFO  
1595 Wynkoop Street  
Denver, CO 80202

For questions regarding notification, testing, monitoring, reporting or other permit requirements, Nathan Wiser of the UIC Technical Enforcement Program may be reached by calling 800-227-8917 (ext. 312-6211). Please be reminded that it is your responsibility to be aware of and to comply with all conditions of your Permit.

If you have any questions regarding this approval, please call Jason Deardorff at 303-312-6583 or 800-227-8917 (ext. 312-6583).

Sincerely,



Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

cc: Uintah & Ouray Business Committee:

Curtis Cesspooch, Chairman  
Frances Poowegup, Vice-chairwoman  
Phillip Chimburas, Councilman  
Stewart Pike, Councilman  
Irene Cuch, Councilwoman  
Richard Jenks, Jr., Councilman

Daniel Picard  
BIA - Uintah & Ouray Indian Agency

Ferron Secakuku  
Director, Natural Resources  
Ute Indian Tribe

Manual Myore  
Director of Energy & Minerals Dept.  
Ute Indian Tribe

Brad Hill  
Acting Associate Director  
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office  
BLM - Vernal Office

Eric Sundberg, Regulatory Analyst  
Newfield Production Company

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-71368
<b>1. TYPE OF WELL</b> Water Injection Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> NEWFIELD PRODUCTION COMPANY		<b>7. UNIT or CA AGREEMENT NAME:</b> GMBU (GRRV)
<b>3. ADDRESS OF OPERATOR:</b> Rt 3 Box 3630 , Myton, UT, 84052		<b>8. WELL NAME and NUMBER:</b> HARBOURTOWN FED 23-34
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1943 FSL 2162 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESW Section: 34 Township: 08.0S Range: 17.0E Meridian: S		<b>9. API NUMBER:</b> 43013319160000
<b>PHONE NUMBER:</b> 435 646-4825 Ext		<b>9. FIELD and POOL or WILDCAT:</b> MONUMENT BUTTE
<b>COUNTY:</b> DUCHESNE		<b>STATE:</b> UTAH
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> <b>ACIDIZE</b>	
<input checked="" type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion: 11/14/2011	<input type="checkbox"/> <b>ALTER CASING</b>	
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b>	
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> <b>CHANGE TUBING</b>	
	<input type="checkbox"/> <b>CHANGE WELL STATUS</b>	
	<input type="checkbox"/> <b>COMMINGLE PRODUCING FORMATIONS</b>	
	<input type="checkbox"/> <b>DEEPEN</b>	
	<input type="checkbox"/> <b>FRACTURE TREAT</b>	
	<input type="checkbox"/> <b>OPERATOR CHANGE</b>	
	<input type="checkbox"/> <b>PLUG AND ABANDON</b>	
	<input type="checkbox"/> <b>PRODUCTION START OR RESUME</b>	
	<input type="checkbox"/> <b>RECLAMATION OF WELL SITE</b>	
	<input type="checkbox"/> <b>REPERFORATE CURRENT FORMATION</b>	
	<input type="checkbox"/> <b>SIDETRACK TO REPAIR WELL</b>	
	<input type="checkbox"/> <b>TUBING REPAIR</b>	
	<input type="checkbox"/> <b>VENT OR FLARE</b>	
	<input type="checkbox"/> <b>WATER SHUTOFF</b>	
	<input type="checkbox"/> <b>SI TA STATUS EXTENSION</b>	
	<input type="checkbox"/> <b>WILDCAT WELL DETERMINATION</b>	
	<input checked="" type="checkbox"/> <b>OTHER</b>	
	<b>OTHER:</b> <input style="width: 100px;" type="text" value="5 YR MIT"/>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b>  On 10/05/2011 Nathan Wiser with the EPA was contacted concerning the 5 year MIT on the above listed well. On 11/14/2011 the casing was pressured up to 1240 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 1575 psig during the test. There was not an EPA representative available to witness the test. <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">             EPA# UT21046-07093           </div> <div style="text-align: center;"> <b>Accepted by the Utah Division of Oil, Gas and Mining</b>  <b>FOR RECORD ONLY</b> </div> </div>		
<b>NAME (PLEASE PRINT)</b> Lucy Chavez-Naupoto	<b>PHONE NUMBER</b> 435 646-4874	<b>TITLE</b> Water Services Technician
<b>SIGNATURE</b> N/A	<b>DATE</b> 11/15/2011	

# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_ Date: 11 / 14 / 11  
Test conducted by: Lynne Monser  
Others present: \_\_\_\_\_

Well Name: <u>Harbour town Federal 23-34-8-17</u>		Type: <u>ER SWD</u>	Status: <u>AC TA UC</u>
Field: <u>Monument Butte</u>			
Location: <u>NE/SW</u>	Sec: <u>34</u>	T <u>8</u> N <u>10</u> R <u>17</u> E/W	County: <u>Duchesne</u> State: <u>Ut.</u>
Operator: <u>Newfield</u>			
Last MIT: <u>1</u>	<u>1</u>	Maximum Allowable Pressure: _____	PSIG

Is this a regularly scheduled test? ☒ Yes ☐ No  
Initial test for permit? ☐ Yes ☒ No  
Test after well rework? ☐ Yes ☒ No  
Well injecting during test? ☐ Yes ☒ No If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: 1 psig

MIT DATA TABLE		Test #1	Test #2	Test #3
<b>TUBING</b>		<b>PRESSURE</b>		
Initial Pressure	<u>1575</u> psig	psig	psig	psig
End of test pressure	<u>1575</u> psig	psig	psig	psig
<b>CASING / TUBING</b>		<b>ANNULUS PRESSURE</b>		
0 minutes	<u>1240</u> psig	psig	psig	psig
5 minutes	<u>1240</u> psig	psig	psig	psig
10 minutes	<u>1240</u> psig	psig	psig	psig
15 minutes	<u>1240</u> psig	psig	psig	psig
20 minutes	<u>1240</u> psig	psig	psig	psig
25 minutes	<u>1240</u> psig	psig	psig	psig
30 minutes	<u>1240</u> psig	psig	psig	psig
_____ minutes	psig	psig	psig	psig
_____ minutes	psig	psig	psig	psig
<b>RESULT</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

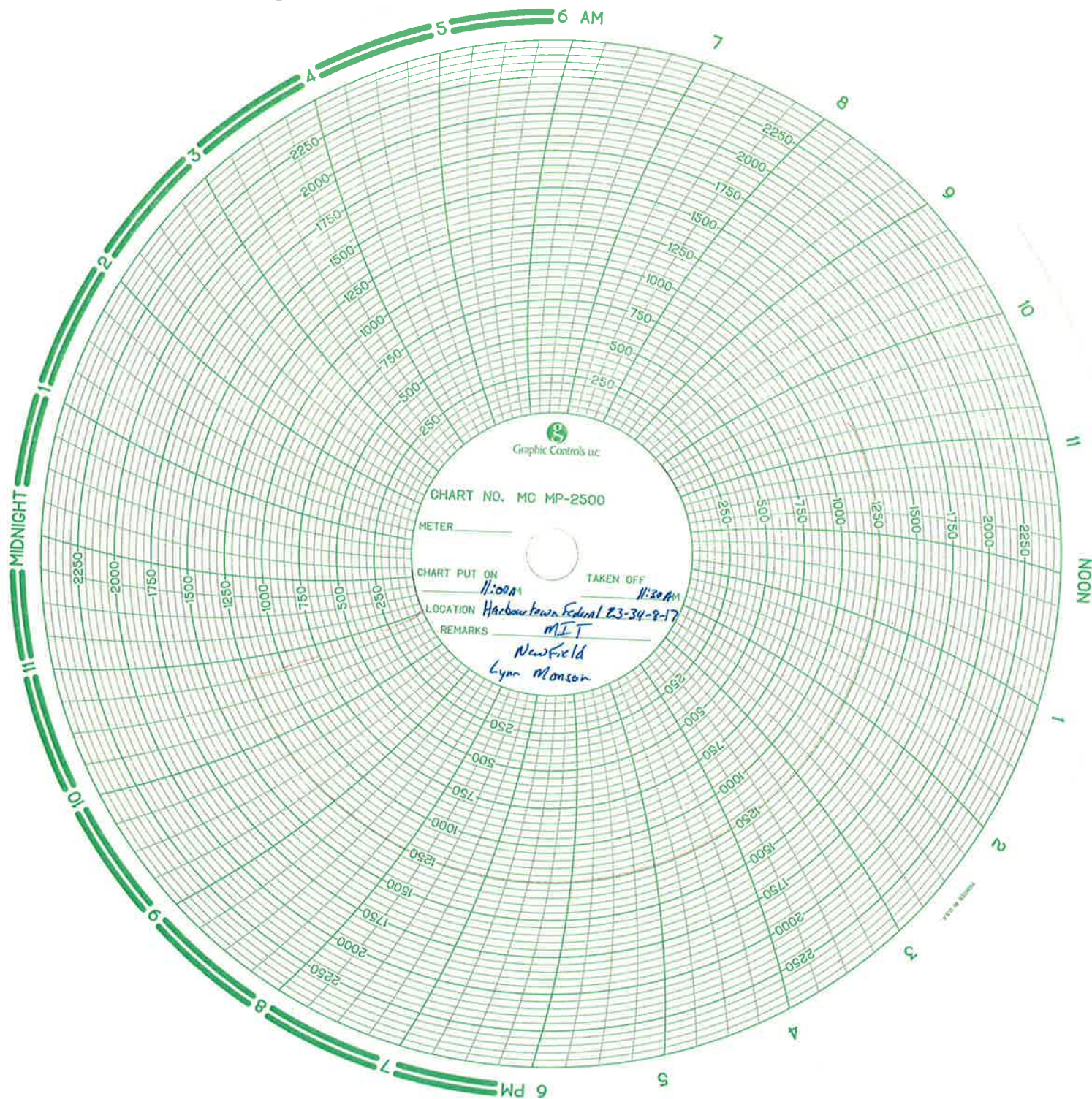
Does the annulus pressure build back up after the test? ☐ Yes ☒ No

## MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness: \_\_\_\_\_

**RECEIVED** Nov. 15, 2011



Spud Date: 3/23/98  
 Put on Production: 11/28/03  
 GL: 5088' KB: 5098'

# Harbourtown Federal 23-34-8-17

Initial Production: 74 BOPD,  
 20 GAS. 0 BWPD

## SURFACE CASING

CSG SIZE: 8-5/8"  
 GRADE:  
 WEIGHT: 24#  
 LENGTH:  
 DEPTH LANDED: 298'  
 HOLE SIZE: 12 1/4"  
 CEMENT DATA: 150 sxs cement

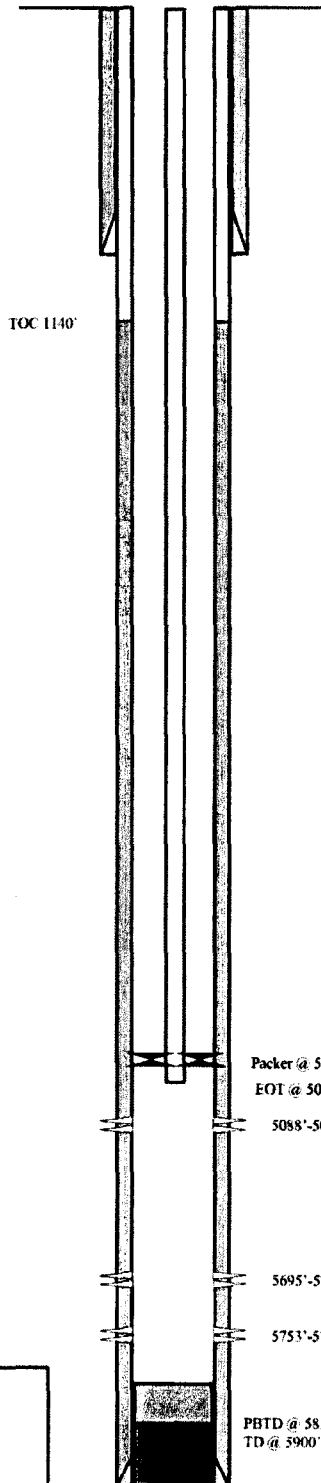
## PRODUCTION CASING

CSG SIZE: 5-1/2"  
 GRADE:  
 WEIGHT: 15.5#  
 LENGTH: 134 jts  
 DEPTH LANDED: 5880'  
 HOLE SIZE: 5 1/4"  
 CEMENT DATA: 470 sxs cement  
 CEMENT TOP AT: 1140' per CBL

## TUBING

SIZE/GRADE/WT.: 2-7/8"  
 NO. OF JOINTS: 157 jts. L-80, 95 jts. J-55 (5023.73')  
 SEATING NIPPLE: 2-7/8" (1.10')  
 SN LANDED AT: 5034.83' KB  
 ARROW #1 PACKER CE AT: 5038.13'  
 TOTAL STRING LENGTH: EOT @ 5042.53'

## Injection Wellbore Diagram



## FRAC JOB

11/21/03 5695'-5704' Frac zone with 60,547# 20/40 sand in 562 bbls fluid.  
 11/21/03 5088'-5095' Frac zone with 75,783# 20/40 sand in 610 bbls fluid.  
 11/30/06 5753'-5762' Frac CP2 sds as follows:  
 w/ 24,577#s of 20/40 sand in 242 bbls of Lightning 17 frac fluid. Perfs broke @ 2093 psi. Treated @ ave pressure of 3565 @ ave rate of 14.1 bpm w/ 6.5 ppg of sand. TSIP was 1700.  
 12-29-06 Convert to Injection well

## PERFORATION RECORD

11/19/03 5695'-5704' 4 SPF 36 holes  
 11/21/03 5088'-5095' 4 SPF 28 holes  
 11/30/06 5753'-5762' 4 SPF 36 holes



Harbourtown Fed. 23-34-8-17  
 1943' FSL & 2162' FWL  
 NESW Section 34-T8S-R17E  
 Duchesne Co, Utah  
 API #43-013-31916 Lease #UTU-76955

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-71368
<b>1. TYPE OF WELL</b> Water Injection Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> NEWFIELD PRODUCTION COMPANY		<b>7. UNIT or CA AGREEMENT NAME:</b> GMBU (GRRV)
<b>3. ADDRESS OF OPERATOR:</b> Rt 3 Box 3630, Myton, UT, 84052		<b>8. WELL NAME and NUMBER:</b> HARBOURTOWN FED 23-34
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1943 FSL 2162 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESW Section: 34 Township: 08.0S Range: 17.0E Meridian: S		<b>9. API NUMBER:</b> 43013319160000
<b>PHONE NUMBER:</b> 435 646-4825 Ext		<b>9. FIELD and POOL or WILDCAT:</b> MONUMENT BUTTE
<b>COUNTY:</b> DUCHESNE		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 10/6/2016	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input checked="" type="checkbox"/> OTHER	
	OTHER: 5 YR MIT	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. 5 YR MIT performed on the above listed well. On 10/6/2016 the casing was pressured up to 1373 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tbg pressure was 911 psig during the test. There was not an EPA representative available to witness the test. EPA #UT22197-07093		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> October 13, 2016		
<b>NAME (PLEASE PRINT)</b> Lucy Chavez-Naupoto	<b>PHONE NUMBER</b> 435 646-4874	<b>TITLE</b> Water Services Technician
<b>SIGNATURE</b> N/A	<b>DATE</b> 10/7/2016	

# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_ Date: 10 / 6 / 2016Test conducted by: Hal Richins

Others present: \_\_\_\_\_

Well Name: <u>Harbourtown 23-34-8-17</u>		Type: <u>ER SWD</u>	Status: <u>AC TA UC</u>
Field: <u>Monument Butte</u>			
Location: <u>23</u>	Sec: <u>34</u>	T <u>8</u> N <u>S</u> R <u>17</u> E <u>W</u>	County: <u>Duchesne</u> State: <u>Utah</u>
Operator: <u>Hal Richins</u>			
Last MIT: <u>10 / 6 / 2011</u>		Maximum Allowable Pressure: _____	PSIG

Is this a regularly scheduled test? ☐ Yes ☒ No  
 Initial test for permit? ☐ Yes ☒ No  
 Test after well rework? ☐ Yes ☒ No  
 Well injecting during test? ☐ Yes ☒ No If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: \_\_\_\_\_ psig

MIT DATA TABLE		Test #1	Test #2	Test #3
<b>TUBING</b>		<b>PRESSURE</b>		
Initial Pressure	<u>911</u> psig	psig	psig	psig
End of test pressure	psig	psig	psig	psig
<b>CASING / TUBING</b>		<b>ANNULUS PRESSURE</b>		
0 minutes	<u>1371.6</u> psig	psig	psig	psig
5 minutes	<u>1372.2</u> psig	psig	psig	psig
10 minutes	<u>1372.6</u> psig	psig	psig	psig
15 minutes	<u>1372.8</u> psig	psig	psig	psig
20 minutes	<u>1373.0</u> psig	psig	psig	psig
25 minutes	<u>1372.8</u> psig	psig	psig	psig
30 minutes	<u>1372.8</u> psig	psig	psig	psig
_____ minutes	psig	psig	psig	psig
_____ minutes	psig	psig	psig	psig
<b>RESULT</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Does the annulus pressure build back up after the test? ☐ Yes ☐ No

## MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Signature of Witness: Hal Richins

Harbourtown 23-34-8-17 (5 year) 10-6-2016  
10/6/2016 9:27:41 AM

